

# LINKSYS®

A Division of Cisco Systems, Inc.



## ADSL Modem

## User Guide



Model No. **AM200 (EU/LA)**

CISCO SYSTEMS



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## How to Use this Guide

Your Guide to the ADSL Modem has been designed to make understanding networking with the Modem easier than ever. Look for the following items when reading this User Guide:



This checkmark means there is a Note of interest and is something you should pay special attention to while using the Modem.



This exclamation point means there is a Caution or Warning and is something that could damage your property or the Modem.

#



This question mark provides you with a reminder about something you might need to do while using the Modem.

In addition to these symbols, there are definitions for technical terms that are presented like this:

***word: definition.***

Also, each figure (diagram, screenshot, or other image) is provided with a figure number and description, like this:

**Figure 0-1: Sample Figure Description**

Figure numbers and descriptions can also be found in the “List of Figures” section in the “Table of Contents”.

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# Chapter 1: Introduction

## Welcome

Thank you for choosing the ADSL Modem. The Linksys ADSL Modem gives you an instant, high-speed connection to the Internet. ADSL technology lets you access the Internet using your existing phone lines, without interfering with your voice phone service. You can talk on the phone and surf the net at the same time. Web surfing and your e-mail are instantly available, anytime.

Installation is quick and simple. Connect it directly to any PC with an available Ethernet port, and you're ready to surf the Internet. Or connect it to a Linksys router and share that high-speed Internet access with everyone on your home network.

Use the instructions in this user guide to help you connect the ADSL Modem and configure it to access the Internet. These instructions should be all you need to get the most out of the ADSL Modem.

#

## What's in this Guide?

This user guide covers the steps for setting up and using the ADSL Modem.

- **Chapter 1: Introduction**  
This chapter describes the ADSL Modem applications and this User Guide.
- **Chapter 2: Getting to Know the ADSL Modem**  
This chapter describes the physical features of the ADSL Modem.
- **Chapter 3: Connecting the ADSL Modem**  
This chapter instructs you on how to connect the ADSL Modem to your network.
- **Chapter 4: Configuring the ADSL Modem**  
This chapter explains how to use the Web-Based Utility to configure the settings on the ADSL Modem.
- **Appendix A: Troubleshooting**  
This appendix describes some problems and solutions, as well as frequently asked questions, regarding installation and use of the ADSL Modem.
- **Appendix B: Upgrading Firmware**  
This appendix instructs you on how to upgrade the firmware on your ADSL Modem if you should need to do so.
- **Appendix C: Glossary**  
This appendix gives a brief glossary of terms frequently used in networking.
- **Appendix D: Specifications**  
This appendix provides the technical specifications for the ADSL Modem.
- **Appendix E: Warranty Information**  
This appendix supplies the warranty information for the ADSL Modem.
- **Appendix F: Regulatory Information**  
This appendix supplies the regulatory information regarding the ADSL Modem.
- **Appendix G: Contact Information**  
This appendix provides contact information for a variety of Linksys resources, including Technical Support.

# Chapter 2: Getting to Know the ADSL Modem

## The Back Panel

The Modem's ports, where cables are connected, are located on the back panel. The Modem's reset button is also located on the back panel.

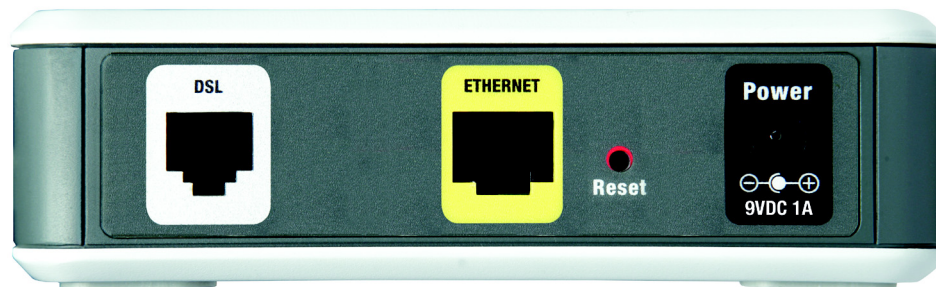


Figure 2-1: Back Panel

- DSL** The **DSL** port connects to the DSL line.
- Ethernet** The **Ethernet** port connects to your computer and other network devices.
- Reset Button** There are two ways to reset the Modem's factory default settings. Either press the **Reset Button**, for approximately ten seconds, or restore the defaults on the Factory Defaults screen of the Administration tab in the Modem's Web-Based Utility.
- Power** The **Power** port is where you connect the power adapter.



**Important:** Resetting the Modem to factory defaults will erase all of your settings (WAN and LAN settings, etc.) and replace them with the factory defaults. Do not reset the Modem if you want to retain these settings.

With these, and many other, Linksys products, your networking options are limitless. Go to the Linksys international website at [www.linksys.com/international](http://www.linksys.com/international) for more information about products that work with the Modem.



## The Front Panel

The Modem's LEDs, where information about network activity is displayed, are located on the front panel.



Figure 2-2: Front Panel

- |                 |   |
|-----------------|---|
| <b>Power</b>    | Green. The <b>Power</b> LED lights up when the Modem is powered on.   |
| <b>Ethernet</b> | Green. The <b>Ethernet</b> LED serves two purposes. If the LED is continuously lit, the Modem is successfully connected to a device through the Ethernet port. If the LED is blinking, it is an indication of any network activity. |
| <b>DSL</b>      | Green. The <b>DSL</b> LED lights up whenever there is a successful DSL connection. The LED blinks while establishing the DSL connection.  |
| <b>Internet</b> | Green. The <b>Internet</b> LED lights up green when an Internet connection to the Internet Service Provider (ISP) session is established. The <b>Internet</b> LED lights up red when the connection to the ISP fails.               |

# Chapter 3: Setting Up and Connecting the ADSL Modem

## Overview

In this chapter, you will connect the Modem to your DSL line and to a computer in your home or business. It is not necessary to mount your Modem, but may be useful to conserve space. There are 2 slots on the underside of the Modem that can be used for wall mounting.

## Wall-Mount Option

You will need 2 suitable screws (4.4 mm screw diameter) to mount the Modem.

1. Determine where you want to mount the Modem. Ensure that the wall you use is smooth, flat, dry and sturdy and make sure the location is within reach of the power outlet.
2. Drill two holes into the wall. Make sure the holes are 101.6 mm (4 inches) apart.
3. Insert a screw into each hole, and leave 3 mm (0.12 inch) of its head exposed.
4. Maneuver the Modem so the wall-mount slots line up with the two screws.
5. Place the wall-mount slots over the screws and slide the Modem down until the screws fit snugly into the wall-mount slots.

Congratulations! The Wall-Mount installation of the Modem is complete. Perform the steps under Connecting the Modem to complete your Modem installation.

## Connecting the Modem

1. Connect one end of the provided phone cable to the DSL (RJ-11 phone) port that is on the back of your Modem. Connect the other end of the phone cable to the wall jack with DSL service.



**NOTE:** A small device called a microfilter (not included) may be necessary between each phone and wall jack to prevent interference. Contact your ISP if you have any questions.

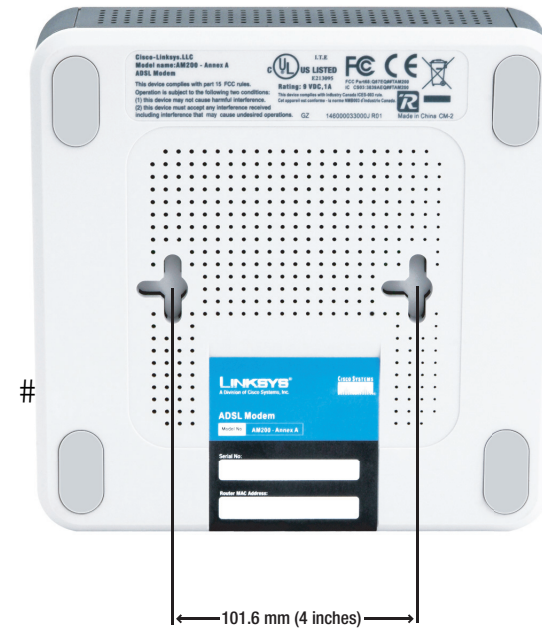


Figure 3-1: Wall-Mount Option

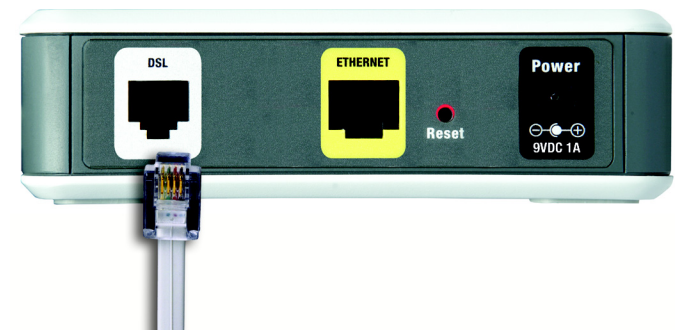


Figure 3-2: DSL Connection

## ADSL Modem



**IMPORTANT:** For countries that have phone jacks with RJ-11 connectors, make sure to only place the microfilters between the phone and the wall jack and **not** between the Modem and the wall jack or your DSL will not connect.

For countries that do **not** have phone jacks with RJ-11 connectors (e.g. France, Sweden, Switzerland, United Kingdom, etc.), except for ISDN users, the microfilter has to be used between the modem and the wall jack, because the microfilter will have the RJ-11 connector.

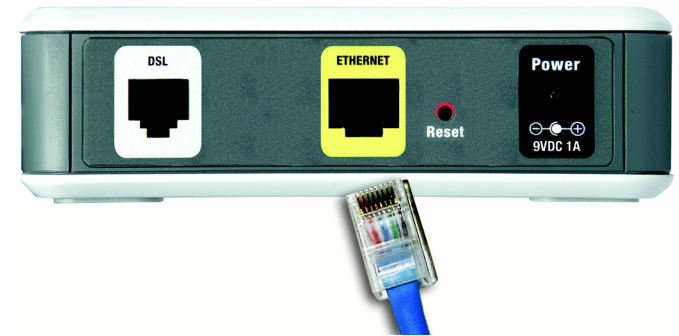
2. Connect one end of the provided Ethernet cable to your PC's Ethernet port. Connect the other end of the cable to the Ethernet port on the back of your Modem.
3. Connect the power adapter to your Modem and to the electrical outlet.



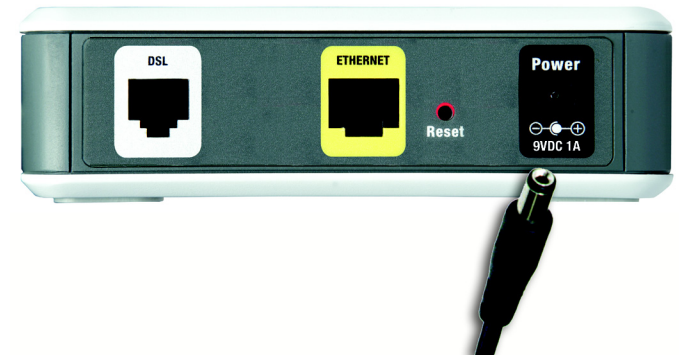
**NOTE:** You should always plug the Modem's power adapter into a power strip with surge protection.

4. Turn on your PC.

**The connection of the Modem is complete.**



**Figure 3-3: Ethernet Connection**



**Figure 3-4: Power Connection**

# Chapter 4: Configuring the ADSL Modem

## Overview

Follow the steps in this chapter and use the Modem's web-based utility to configure the Modem. This chapter will describe each web page in the Utility and each page's key functions. The utility can be accessed via your web browser through use of a computer connected to the Modem. For a basic network setup, most users only have to use the following screens of the Utility:

- **Basic Setup.** On the Basic Setup screen, enter the settings provided by your ISP.
- **Management.** Click the **Administration** tab and then the **Management** tab. The Modem's default username and password is admin. To secure the Modem, change the Password from its default.

There are five main tabs: Setup, Security, Applications & Gaming, Administration, and Status. Additional tabs will be available after you click one of the main tabs.

## Setup

- **Basic Setup.** Enter the Internet connection and network settings on this screen.
- **DDNS.** To enable the Modem's Dynamic Domain Name System (DDNS) feature, complete the fields on this screen.
- **Advanced Routing.** On this screen, you can alter Dynamic Routing, and Static Routing configurations.

## Security

- **Firewall.** This screen contains Filters and Block WAN Requests. Filters block specific internal users from accessing the Internet and block anonymous Internet requests.
- **VPN.** To enable or disable IPSec and/or PPTP Pass-through, use this screen.

## Applications & Gaming

- **Port Range Forwarding.** To set up public services or other specialized Internet applications on your network, click this tab.



**Have You:** Enabled TCP/IP on your computers? computers communicate over the network with this protocol. Refer to Windows Help for more information on TCP/IP.

#



**Note:** For added security, you should change the password through the Administration tab.

## ADSL Modem

- **Port Triggering.** To set up triggered ranges and forwarded ranges for Internet applications, click this tab.
- **NAT Mapping Table.** This table displays the current NAT address mappings.
- **DMZ.** To allow one local user to be exposed to the Internet for use of special-purpose services, use this screen.

## Administration

- **Management.** On this screen, alter Modem access privileges, SNMP, UPnP, and WT-82 settings.
- **SNMP.** Use this screen to configure SNMP manager access.
- **Log.** If you want to view or save activity logs, click this tab.
- **Diagnostics.** Use this screen to do a Ping Test or Traceroute Test.
- **Firmware Upgrade.** Click this tab if you want to upgrade the Modem's firmware.
- **Factory Defaults.** If you want to restore the Modem's factory defaults, use this screen.
- **Reboot.** This tab allows you to do a hard reboot of your Modem.

## Status

- **Modem.** This screen provides status information about the Modem.
- **Local Network.** This provides status information about the local network.

## How to Access the Web-based Utility

To access the web-based utility, launch Internet Explorer or Netscape Navigator, and enter the Modem's default IP address, 192.168.1.1, in the Address field. Then press Enter.

A Log In screen appears. Enter **admin** (the default user name) in the Username field, and enter **admin** (the default password) in the Password field. Then click the **Login** button.

Figure 4-1: Password Screen

## The Setup Tab

### Basic Setup

The first screen that appears is the Basic Setup tab. This tab allows you to change the Modem's general settings. Change these settings as described here and click the **Save Settings** button to save your changes, or click the **Cancel Changes** button to cancel your changes.

### Internet Setup

### ADSL Settings

- **Encapsulation.** The Modem supports five Encapsulation methods: RFC 1483 Bridged, RFC 1483 Routed, RFC 2516 PPPoE, RFC 2364 PPPoA, and Bridged Mode Only. Select the appropriate type of encapsulation from the drop-down menu. The *Basic Setup* screen and available features will vary depending on what type of encapsulation you select.
- **Virtual Circuit ID.** These fields consist of two items: VPI (Virtual Path Identifier) and VCI (Virtual Channel Identifier). Your ISP will provide the correct settings for these fields.
- **Multiplexing.** Select **LLC** or **VC**, depending on your ISP.
- **DSL Modulation.** Select a type from the drop-down menu: **Auto**, **T1.413i2**, **G.992.1 (G.DMT)**, **G.992.2 (G.Lite)**, **G.922.3(ADSL2)**, **G.992.5(ADSL2+)**

Figure 4-2: Basic Setup Tab

## RFC 1483 Bridged

### Dynamic IP

IP Settings. Select **Obtain an IP Address Automatically** if your ISP says you are connecting through a dynamic IP address.

### Static IP

If you are required to use a permanent (static) IP address to connect to the Internet, then select **Use the following IP Address**.

- IP Address. This is the Modem's IP address, when seen from the WAN, or the Internet. Your ISP will provide you with the IP Address you need to specify here.
- Subnet Mask. This is the Modem's Subnet Mask. Your ISP will provide you with the Subnet Mask.
- Default Gateway. Your ISP will provide you with the default Gateway Address, which is the ISP server's IP address.
- Primary DNS (Required) and Secondary DNS (Optional). Your ISP will provide you with at least one DNS (Domain Name System) Server IP Address.

## RFC 1483 Routed

If you are required to use RFC 1483 Routed, then select **RFC 1483 Routed**. Select **Obtain IP Address Automatically (DHCP)** or **Set Static IP Manually**. If you select *Set Static IP Manually*, enter the information below.

- Internet IP Address. This is the Modem's IP address, when seen from the WAN, or the Internet. Your ISP will provide you with the IP Address you need to specify here.
- Subnet Mask. This is the Modem's Subnet Mask. Your ISP will provide you with the Subnet Mask.
- Default Gateway. Your ISP will provide you with the default Gateway Address, which is the ISP server's IP address.
- Primary DNS (Required) and Secondary DNS (Optional). Your ISP will provide you with at least one DNS (Domain Name System) Server IP Address.

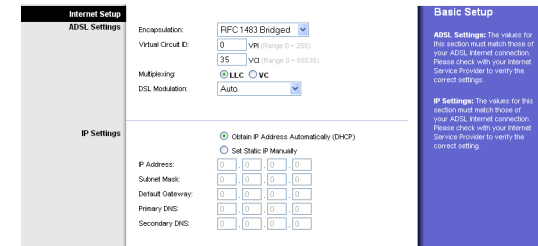


Figure 4-3: Dynamic IP

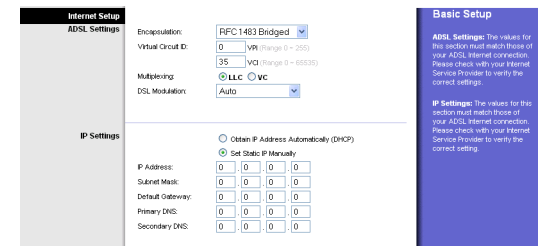


Figure 4-4: Static IP

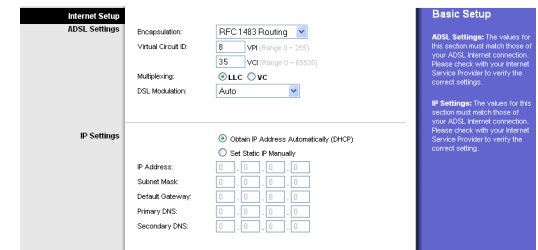


Figure 4-5: RFC Routed

## RFC 2516 PPPoE

Some DSL-based ISPs use PPPoE (Point-to-Point Protocol over Ethernet) to establish Internet connections. If you are connected to the Internet through a DSL line, check with your ISP to see if they use PPPoE. If they do, you will have to enable PPPoE.

- **User Name and Password.** Enter the User Name and Password provided by your ISP.
- **Keep Alive: Redial Period.** If you select this option, the Modem will periodically check your Internet connection. If you are disconnected, then the Modem will automatically re-establish your connection. To use this option, click the **Keep Alive** radio button. In the *Redial Period* field, specify how often you want the Modem to check the Internet connection. The default Redial Period is **3** minutes.
- **Connect on Demand: Max Idle Time.** You can configure the Modem to disconnect the Internet connection after it has been inactive for a specified period of time (Max Idle Time). If your Internet connection has been terminated due to inactivity, Connect on Demand enables the Modem to automatically re-establish your connection as soon as you attempt to access the Internet again. To use this option, click the **Connect on Demand** radio button. In the *Max Idle Time* field, enter the number of minutes you want to have elapsed before your Internet connection terminates.

## RFC 2364 PPPoA

Some DSL-based ISPs use PPPoA (Point-to-Point Protocol over ATM) to establish Internet connections. If you are connected to the Internet through a DSL line, check with your ISP to see if they use PPPoA. If they do, you will have to enable PPPoA.

- **User Name and Password.** Enter the User Name and Password provided by your ISP.
- **Keep Alive: Redial Period.** If you select this option, the Modem will periodically check your Internet connection. If you are disconnected, then the Modem will automatically re-establish your connection. To use this option, click the **Keep Alive** radio button. In the *Redial Period* field, specify how often you want the Modem to check the Internet connection. The default Redial Period is **3** minutes.
- **Connect on Demand: Max Idle Time.** You can configure the Modem to disconnect the Internet connection after it has been inactive for a specified period of time (Max Idle Time). If your Internet connection has been terminated due to inactivity, Connect on Demand enables the Modem to automatically re-establish your connection as soon as you attempt to access the Internet again. To use this option, click the **Connect on Demand** radio button. In the *Max Idle Time* field, enter the number of minutes you want to have elapsed before your Internet connection terminates.

The screenshot shows the 'Internet Setup' tab with the 'ADSL Settings' section. The 'Encapsulation' dropdown is set to 'RFC 2516 PPPoE'. The 'Virtual Circuit ID' is set to '8' (range 0-255) and the 'VPI' is set to '35' (range 0-65535). The 'Multiplexing' section has 'LLC' selected. The 'DSL Modulation' is set to 'Auto'. The 'PPPoE Settings' section has 'User Name' and 'Password' fields. The 'Keep Alive' radio button is selected, with a 'Redial Period' of '3' minutes (range 0-500). The 'Connect on Demand' radio button is unselected, with a 'Max Idle' time of '20' minutes (range 1-1000).

Figure 4-6: RFC 2516 PPPoE

The screenshot shows the 'Internet Setup' tab with the 'ADSL Settings' section. The 'Encapsulation' dropdown is set to 'RFC 2364 PPPoA'. The 'Virtual Circuit ID' is set to '8' (range 0-255) and the 'VPI' is set to '35' (range 0-65535). The 'Multiplexing' section has 'LLC' selected. The 'DSL Modulation' is set to 'Auto'. The 'PPPoA Settings' section has 'User Name' and 'Password' fields. The 'Keep Alive' radio button is selected, with a 'Redial Period' of '3' minutes (range 0-500). The 'Connect on Demand' radio button is unselected, with a 'Max Idle' time of '20' minutes (range 1-1000).

Figure 4-7: RFC 2364 PPPoA



## Bridged Mode Only

If you are using your Modem as a bridge, which makes the Modem act like a stand-alone modem, select **Bridged Mode Only**. All NAT and routing settings are disabled in this mode.

## Optional Settings (required by some ISPs)

- **Host Name and Domain Name.** These fields allow you to supply a host and domain name for the Modem. Some ISPs require these names as identification. You may have to check with your ISP to see if your broadband Internet service has been configured with a host and domain name. In most cases, you can leave these fields blank.

## Network Setup

- **Modem IP.** The values for the Modem's Local IP Address and Subnet Mask are shown here. In most cases, keeping the default values will work.
  - **Local IP Address.** The default value is **192.168.1.1**.
  - **Subnet Mask.** The default value is **255.255.255.0**.
- **Network Address Server Settings (DHCP).** Configure the Modem's Dynamic Host Configuration Protocol (DHCP) settings in this section.
  - **Local DHCP Server.** A Dynamic Host Configuration Protocol (DHCP) server automatically assigns an IP address to each computer on your network for you. Unless you already have one, it is highly recommended that you leave the Modem enabled as a DHCP server.
  - **Start IP Address.** Enter a value for the DHCP server to start with when issuing IP addresses. This value must be 192.168.1. 2 or greater, because the default IP address for the Modem is 192.168.1.1.
  - **Number of Addresses.** Enter the maximum number of users/clients that can obtain an IP address. The number will vary depending on the starting IP address entered.
  - **IP Address Range.** The IP address range is displayed after entering the Start IP address.
  - **Client Lease Time.** The Client Lease Time is the amount of time a computer will be allowed connection to the Modem with its current dynamic IP address. Enter the amount of time, in minutes, that the computer will be "leased" this dynamic IP address.

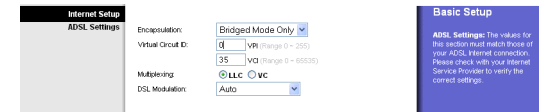


Figure 4-8: Bridged Mode Only

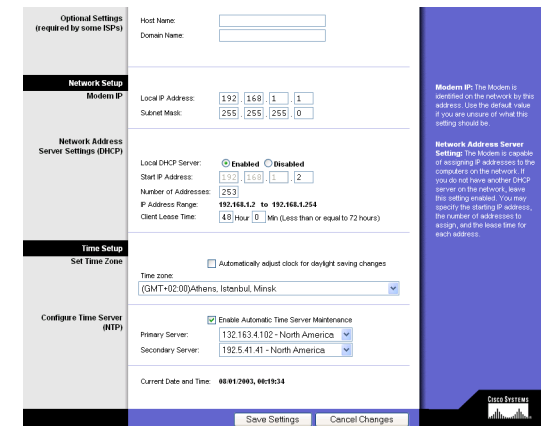


Figure 4-9: Network Setup

## Time Setup

- Set Time Zone. Select the appropriate time zone for the Modem's location. If appropriate, check the **Automatically adjust clock for daylight saving changes** checkbox.
- Configure Time Server (NTP). When the **Automatic Time Server Maintenance** checkbox is selected, the Current Date and Time are synchronized to the selected Primary Server or Secondary Server (if the Primary is unavailable) over the Internet.

When finished making your changes on this tab, click the **Save Settings** button to save these changes, or click the **Cancel Changes** button to undo your changes.

## DDNS

The Modem offers a Dynamic Domain Name System (DDNS) feature. DDNS lets you assign a fixed host and domain name to a dynamic Internet IP address. It is useful when you are hosting your own website, FTP server, or other server behind the Modem. Before you can use this feature, you need to sign up for DDNS service at DynDNS.org or TZO.com.

DDNS Service. If your DDNS service is provided by DynDNS.org, then select **DynDNS.org** or if your DDNS service is provided by TZO.com, then select **TZO.com** in the drop-down menu. To disable DDNS Service, select **Disabled**.

### DynDNS.org

- User Name, Password, and Host Name. Enter the User Name, Password, and Host Name of the account you set up with DynDNS.org.
- Internet IP Address. The Modem's current Internet IP Address is displayed here. Because it is dynamic, it will change.
- Status. The status of the DDNS service connection is displayed here.

### TZO.com

- E-mail Address, Password, and Domain Name. Enter the Mail Address, TZO Password Key, and Domain Name of the service you set up with TZO.
- Internet IP Address. The Modem's current Internet IP Address is displayed here. Because it is dynamic, this will change.
- Status. The status of the DDNS service connection is displayed here.

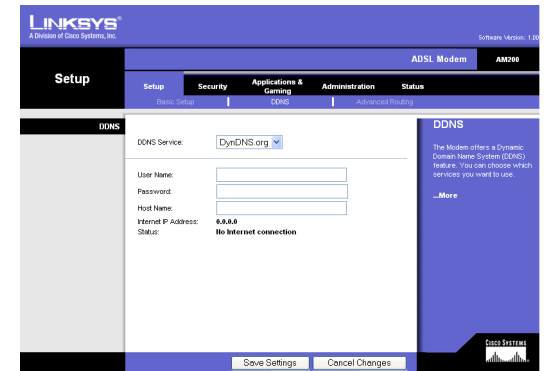


Figure 4-10: DynDNS.org

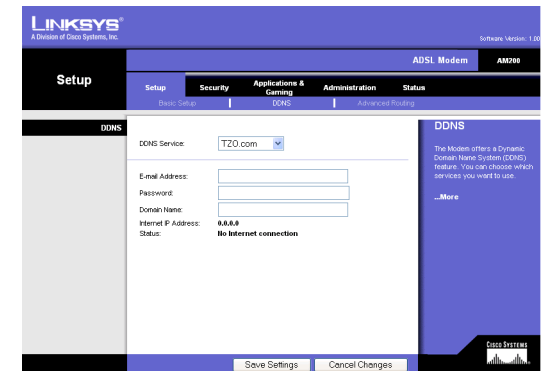


Figure 4-11: TZO.com

When finished making your changes on this tab, click the **Save Settings** button to save these changes, or click the **Cancel Changes** button to undo your changes.

## Advanced Routing

The Advanced Routing screen allows you to configure the dynamic routing and static routing settings.

- **Operating Mode.** If you want to use Static Routing, select **Gateway** from the drop-down menu. If you have more than one router in your network and you need to use Dynamic Routing, select **Router** from the drop-down menu.
- **Static Routing.** If the Modem is connected to more than one network, it may be necessary to set up a static route between them. A static route is a pre-determined pathway that network information must travel to reach a specific host or network. To create a static route, change the following settings:
  - **Select set number.** Select the number of the static route from the drop-down menu. The Modem supports up to 20 static route entries. If you need to delete a route, after selecting the entry, click the **Delete This Entry** button.
  - **Enter Route Name.** Enter a reference name for the defined route.
  - **Destination LAN IP.** The Destination IP Address is the address of the remote network or host to which you want to assign a static route. Enter the IP address of the host for which you wish to create a static route. If you are building a route to an entire network, be sure that the network portion of the IP address is set to 0.
  - **Subnet Mask.** The Subnet Mask (also known as the Network Mask) determines which portion of an IP address is the network portion, and which portion is the host portion.
  - **Default Gateway.** This IP address should be the IP address of the gateway device that allows for contact between the Gateway and the remote network or host.
  - **Interface.** Select your interface from the drop-down menu. Select LAN or WAN (Internet).
- **Show Routing Table.** Click the **Show Routing Table** button to open a screen displaying how data is routed through your LAN. For each route, the Destination LAN IP, Subnet Mask, Gateway, and Interface are displayed. Click the **Refresh** button to update the information. Click the **Close** button to return to the previous screen.

When finished making your changes on this tab, click the **Save Settings** button to save these changes, or click the **Cancel Changes** button to undo your changes.

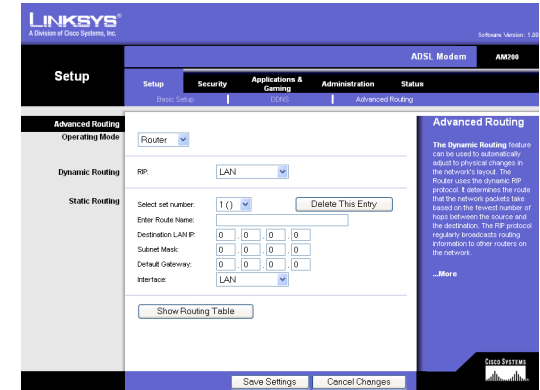


Figure 4-12: Advanced Routing

| Routing Table Entry List |                 |             |           |
|--------------------------|-----------------|-------------|-----------|
| Destination LAN IP       | Subnet Mask     | Gateway     | Interface |
| 192.168.1.0              | 255.255.255.0   | 192.168.1.1 | LAN       |
| 127.0.0.1                | 255.255.255.255 | 127.0.0.1   | Loopback  |

| Static Routing Table Entry List |             |         |           |
|---------------------------------|-------------|---------|-----------|
| Destination LAN IP              | Subnet Mask | Gateway | Interface |
| None                            | None        | None    | None      |

Figure 4-13: Routing Table

## The Security Tab

### Firewall

When you click the Security tab, you will see the Firewall screen. You can add Firewall Protection and Filter Multicast.

- **Firewall Protection.** To add Firewall Protection, click Enabled. If you do not want Firewall Protection, click Disabled. If you enable Firewall Protection and click Save Settings, you enable the *Schedule Rule, Access Control, MAC Filter, URL Blocking, and Intrusion Detection* tabs.
- **Filter Multicast.** Multicasting allows for multiple transmissions to specific recipients at the same time. If multicasting is permitted, then the Modem will allow IP multicast packets to be forwarded to the appropriate computers. Place a checkmark in the box to enable filter multicasting, if unchecked this feature is disabled.

When finished making your changes on this tab, click the **Save Settings** button to save these changes, or click the **Cancel Changes** button to undo your changes.

### Access Control

Access Control allows users to define the traffic type permitted or not permitted to WAN port service. This page allows you to define service limitations of client PCs, including IP addresses, service type, and scheduling rule criteria.

To add a filtering rule, click **Add Filtering Rule**. The *Normal Filtering Table* displays these rules.

- **Client PC Name.** Enter a name or description for the client PC in the Client PC Description field.
- **Client PC IP Address.** Enter the IP address or IP range you wish to filter in the Client PC IP Address field.
- **Client PC Service.** Many common services have been predefined and made available for blocking or filtering. To block a service, click the checkbox next to the service you wish to block.
- **User Define.** You can define a custom filter by entering a TCP Port Range or UDP Port Range. You can select Always Blocking from the pull down menu, or the schedule rules you previously set up on the Schedule Rule screen.

When finished making your changes on this tab, click the **Save Settings** button to save these changes, or click the **Cancel Changes** button to undo your changes.

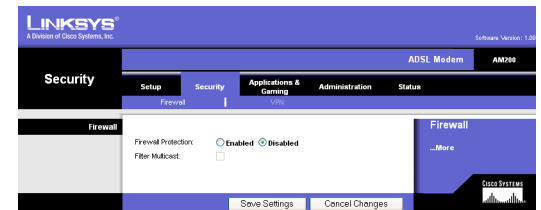


Figure 4-14: Firewall

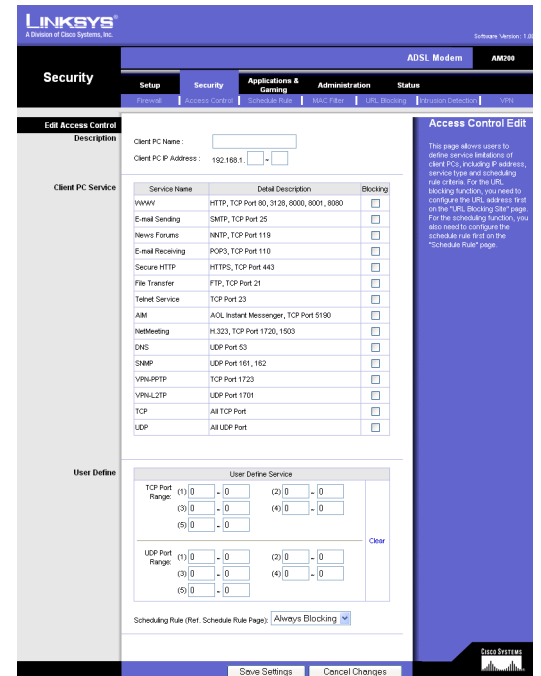


Figure 4-15: Access Control

## Schedule Rule

To set time periods for filtering or access, click **Add Schedule Rule**. The *Schedule Rule Table* displays these scheduling rules.

- **Name/Comment.** Choose a name for the rule (example: NoSurfingAfter10PM) and enter it in the *Name* field. Enter a definition or comment for the rule (example: Block kids from Web after 10) in the *Comment* field.
- **Activate Time Period.** You can set starting and ending times for specific days of the week or for every day. Select the desired day or **Every Day**, then enter the *Start Time* and *End Time* using the twenty four hour format (example: 22 00 is 10PM) in the hours and minutes fields.

When finished making your changes on this tab, click the **Save Settings** button to save these changes, or click the **Cancel Changes** button to undo your changes.

## MAC Filter

This screen allows you to filter by MAC address. To filter by MAC address, enable MAC Address Control, then enter up to 32 MAC addresses or copy the MAC addresses from the DHCP Client List drop down menu.

### Control

- **MAC Address Control.** To filter by MAC address, click the **Yes** button, or to disable the feature, click the **No** button. When MAC Address Control is enabled, only computers with a MAC address listed in the table are granted access to the Internet.

### Filter Table

- **MAC Filtering Table.** When MAC Address Control is enabled, you can enter up to 32 MAC addresses to be allowed to access the network.
- **DHCP Client List.** You can copy the MAC address from the DHCP Client List drop down menu. Select the MAC address from the *DHCP Client List* drop down menu, click the **Copy to** button, and select the number you want to copy it to.

When finished making your changes on this tab, click the **Save Settings** button to save these changes, or click the **Cancel Changes** button to undo your changes.

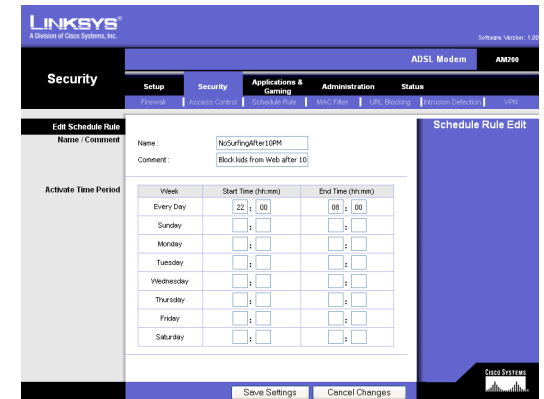


Figure 4-16: Edit Schedule Rule

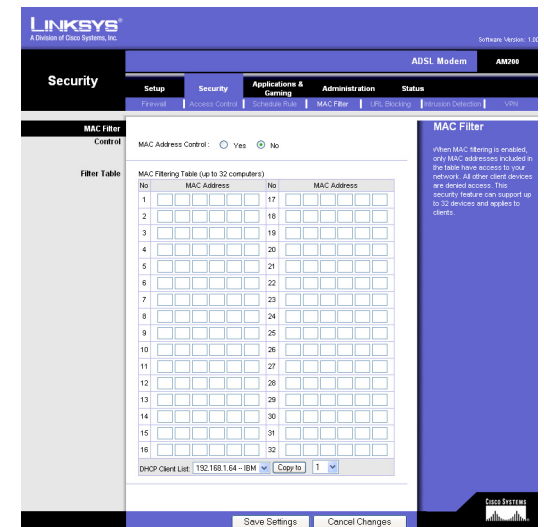


Figure 4-17: MAC Filtering

## URL Blocking

This screen allows the user to block access to certain web sites from a particular PC by entering either a full URL address or just a keyword of the web site. If you want to remove all the URLs and Keywords from the list, click the **Clear All** button.

When finished making your changes on this tab, click the **Save Settings** button to save these changes, or click the **Cancel Changes** button to undo your changes.

## Intrusion Detection

This screen allows common hacker attacks to be blocked. All of these types of intrusions are blocked by default. If you want to allow the traffic for a service through, check the box for the desired service.

Intrusion Detection Features include RIP defect and Discard Ping to WAN.

Stateful Packet Inspection features include SPI and Anti-DoS firewall protection, Packet Fragmentation, TCP Connection, UDP Session, FTP Service, H.323 Service, and TFTP Service.

## Alert

- **Your E-mail Address.** Enter the e-mail address that will receive alert logs in the field.
- **SMTP Server Address.** Enter the IP address of the SMTP server in the field.
- **SMTP User Name.** Enter the user name used to login to the SMTP server.
- **SMTP Password.** Enter the password used to login to the SMTP server.

## VPN

Virtual Private Networking (VPN) is a security measure that creates a secure connection between two remote locations. The VPN screen allows you to configure your VPN settings to make your network more secure. Use the settings on this tab to allow VPN tunnels using IPSec, L2TP, or PPTP protocols to pass through the Modem's firewall.

### VPN Passthrough

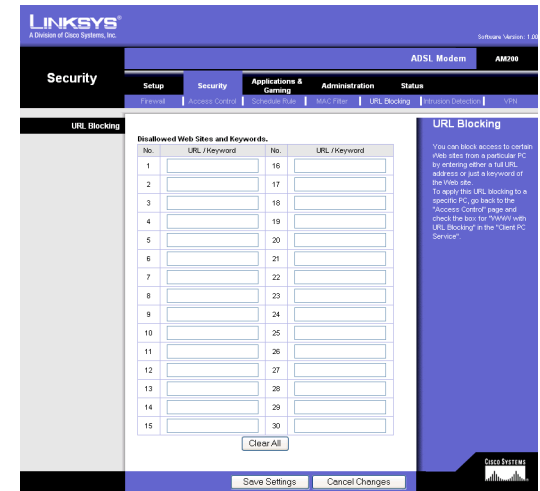


Figure 4-18: URL Blocking

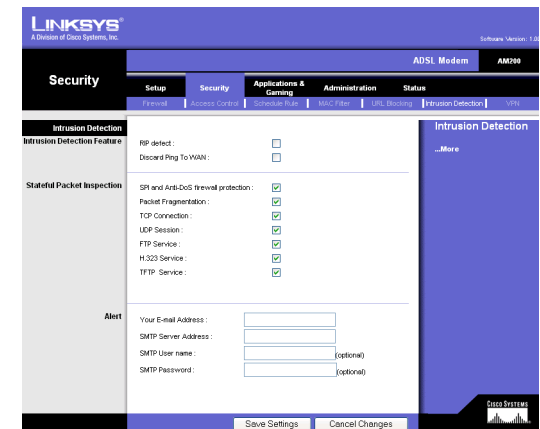


Figure 4-19: Intrusion Detection

## ADSL Modem

- **IPSec Passthrough.** Internet Protocol Security (IPSec) is a suite of protocols used to implement secure exchange of packets at the IP layer. To allow IPSec Passthrough, click the **Enabled** option. To disable IPSec Passthrough, click the **Disabled** option.
- **L2TP Passthrough.** Layering 2 Tunneling Protocol Passthrough is an extension of the Point-to-Point Tunneling Protocol (PPTP) used to enable the operation of a VPN over the Internet. To allow L2TP Passthrough, click the **Enabled** option. To disable L2TP Passthrough, click the **Disabled** option.
- **PPTP Passthrough.** Point-to-Point Tunneling Protocol Passthrough is the method used to enable VPN sessions to a Windows NT 4.0 or 2000 server. To allow PPTP Passthrough, click the **Enabled** option. To disable PPTP Passthrough, click the **Disabled** option.

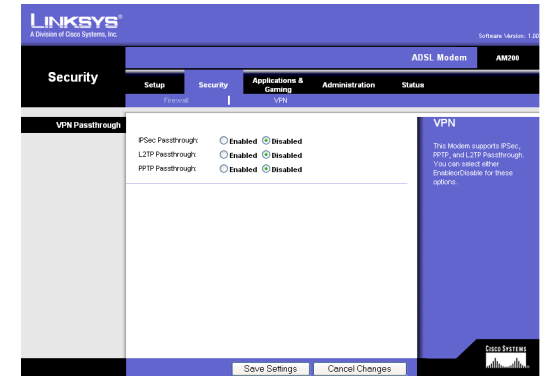


Figure 4-20: VPN Passthrough

## The Applications and Gaming Tab

The Applications and Gaming Tab allows you to set up public services on your network, such as web servers, FTP servers, e-mail servers, or other specialized Internet applications. (Specialized Internet applications are any applications that use Internet access to perform functions such as videoconferencing or online gaming. Some Internet applications may not require any forwarding.)

### Port Range Forwarding

The Port Forwarding screen sets up public services on your network, such as web servers, FTP servers, e-mail servers, or other specialized Internet applications. (Specialized Internet applications are any applications that use Internet access to perform functions such as videoconferencing or online gaming. Some Internet applications may not require any forwarding.)

When users send this type of request to your network via the Internet, the Modem will forward those requests to the appropriate computer. Any computer whose port is being forwarded should have its DHCP client function disabled and should have a static IP address assigned to it because its IP address may change when using the DHCP function.

- **Application.** Enter the name you wish to give each application.
- **Start and End.** Enter the starting and ending numbers of the port you wish to forward.
- **Protocol.** Select the type of protocol you wish to use for each application: **TCP**, **UDP**, or **Both**.
- **IP Address.** Enter the IP Address of the appropriate computer.
- **Enable.** This checkbox must be selected to forward the requests to the defined IP address.

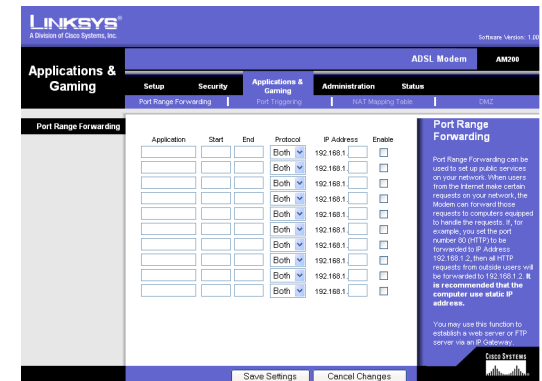


Figure 4-21: Port Range Forwarding

## ADSL Modem

When finished making your changes on this tab, click the **Save Settings** button to save these changes, or click the **Cancel Changes** button to undo your changes.

## Port Triggering

Port Triggering is used for special applications that can request a port to be opened on demand. For this feature, the Modem will watch outgoing data for specific port numbers. The Modem will remember the IP address of the computer that sends a transmission requesting data, so that when the requested data returns through the Modem, the data is pulled back to the proper computer by way of IP address and port mapping rules.

- **Trigger Port.** Enter the Trigger Port number in the field.
- **Trigger Type.** Select the Trigger Type protocol TCP or UDP
- **Public Port.** Enter the name you wish to give each public port application.
- **Public Type.** Select the Public Type protocol TCP or UDP.
- **Enabled.** Click the **Enabled** checkbox to enable port triggering for the chosen application.

When finished making your changes on this tab, click the **Save Settings** button to save these changes, or click the **Cancel Changes** button to undo your changes.

## NAT Mapping Table

**NAT Mapping Table.** Clicking this button will open a screen that allows you to view the current NAT address mappings. Click **Refresh** to refresh the screen.

## DMZ

The DMZ screen allows one local user to be exposed to the Internet for use of a special-purpose service such as Internet gaming and videoconferencing through DMZ hosting. DMZ hosting forwards all the ports for one computer at the same time, which differs from Port Range Forwarding, which can only forward a maximum of 10 ranges of ports.

- **DMZ.** This feature allows one local user to be exposed to the Internet for use of a special-purpose service such as Internet gaming and videoconferencing. To use this feature, select **Enabled**. To disable DMZ, select **Disabled**.
- **Client PC IP Address.** To expose one computer, enter the computer's IP address.

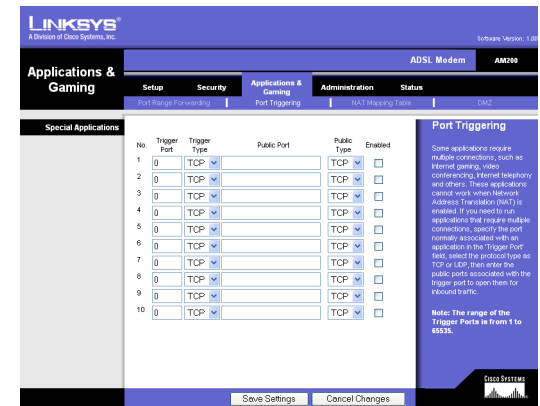


Figure 4-22: Port Triggering

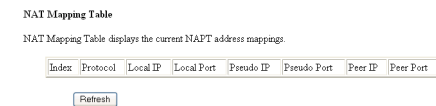


Figure 4-23: NAT Mapping Table

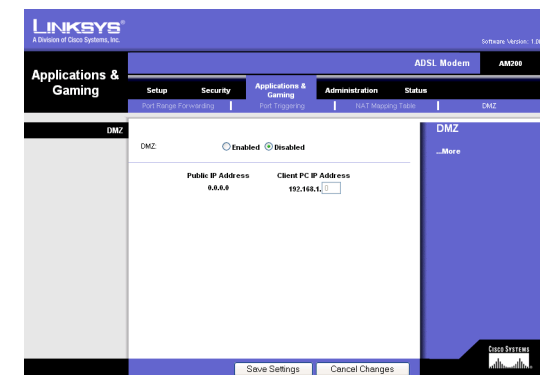


Figure 4-24: DMZ



When finished making your changes on this tab, click the **Save Settings** button to save these changes, or click the **Cancel Changes** button to undo your changes.

## The Administration Tab

### Management

This section of the Administration tab allows the network’s administrator to manage specific Modem functions for access and security.

**Local Modem Access.** You can change the Modem’s password from here. Enter a new Modem password and then type it again in the *Re-enter to confirm* field to confirm.

**Remote Administration.** To access the Modem remotely, from outside the network, select **Enabled**. Then, enter the port number that will be open to outside access in the *Administration Port* field. You will need to enter the Modem’s password when accessing the Modem through Remote Administration.



**IMPORTANT:** Enabling Remote Administration allows anyone with access to your password to configure the Modem from somewhere else on the Internet.

**UPnP.** UPnP allows Windows to automatically configure the Modem for various Internet applications, such as gaming and videoconferencing. When using UPnP features, select **Enabled**. Because allowing this may present a risk to security, this feature is disabled by default.

When finished making your changes on this tab, click the **Save Settings** button to save these changes, or click the **Cancel Changes** button to undo your changes.

### SNMP

SNMP is a popular network monitoring and management protocol. To enable SNMP, click **Enabled**. To disable SNMP, click **Disabled**.

#### SNMP Community

- **Community.** The community name functions as a password for sending trap notifications to the target SNMP program. It is useful to manage multiple devices at the same time. Enter the name of the community you’re using.

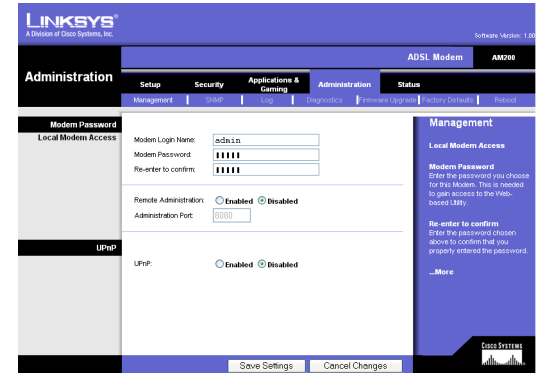


Figure 4-25: Management

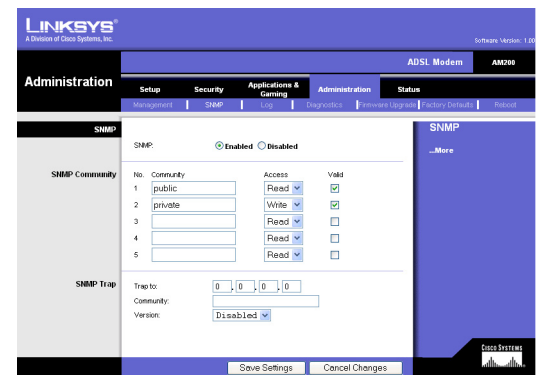


Figure 4-26: SNMP

## ADSL Modem

- **Access.** Select the type of access allowed to the Modem's SNMP information by the selected community: read or write.
- **Valid.** To enable the community's access, click the Valid checkbox.

## SNMP Trap

**Trap to.** Enter the IP address of the remote host computer that will receive the trap messages.

**Community.** The community name functions as a password for sending trap notifications to the target SNMP program. It is useful to manage multiple devices at the same. Enter the name of the community you're using.

**Version.** Select the version number

## Log

The Modem can keep logs of all traffic for your Internet connection. To disable the Log function, keep the default setting, **Disabled**. To monitor traffic between the network and the Internet, select **Enabled**. When you wish to view the logs, click **Incoming Log** or **Outgoing Log**, depending on which you wish to view.

Change these settings as described here and click the **Save Settings** button to apply your changes or **Cancel Changes** to cancel your changes.

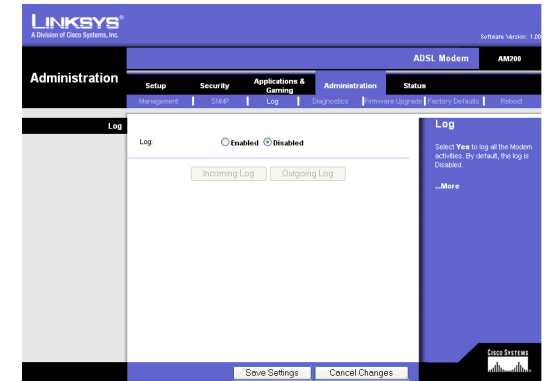


Figure 4-27: Log



Figure 4-28: Incoming Log



Figure 4-29: Outgoing Log

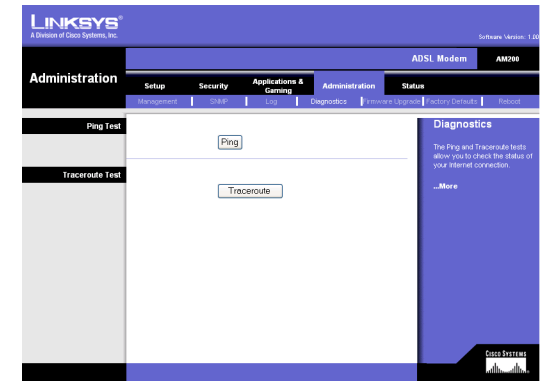
## Diagnostics

The diagnostic tests (Ping and Traceroute) allow you to check the connections of your network components.

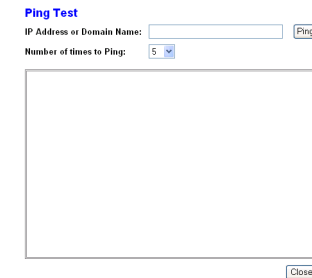
**Ping Test.** The Ping test will check the status of a connection. Click the **Ping** button to open the *Ping Test* screen. Enter the address of the PC whose connection you wish to test and how many times you wish to test it. Then, click the **Ping** button. The Ping Test screen will show if the test was successful. To stop the test, click the **Stop** button. Click the **Clear Log** button to clear the screen. Click the **Close** button to return to the *Diagnostics* screen.

**Traceroute Test.** To test the performance of a connect, click the **Traceroute** button. Enter the address of the PC whose connection you wish to test and click the **Traceroute** button. The Traceroute Test screen will show if the test was successful. To stop the test, click the **Stop** button. Click the **Clear Log** button to clear the screen. Click the **Close** button to return to the *Diagnostics* screen.

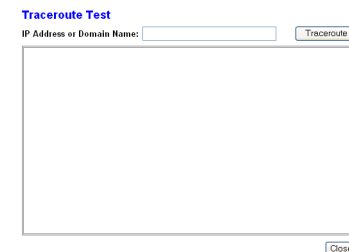
Change these settings as described here and click the **Save Settings** button to apply your changes or **Cancel Changes** to cancel your changes.



**Figure 4-30: Diagnostic Tests**



**Figure 4-31: Ping Test**



**Figure 4-32: Traceroute Test**

## Firmware Upgrade

Firmware can be upgraded by clicking the **Upgrade** button after browsing for the firmware, which you can download from the Linksys website. Do not upgrade your firmware unless you are experiencing problems with the Modem. For more information about upgrading firmware, refer to “Appendix B: Upgrading Firmware”.

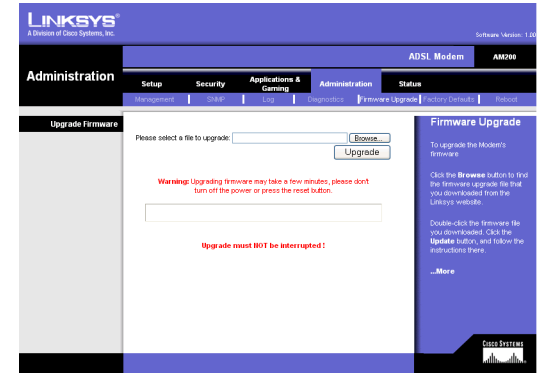


Figure 4-33: Firmware Upgrade

## Factory Defaults

Restore Factory Defaults. If you wish to restore the Modem to its factory default settings and lose all your settings, click **Yes**.

To begin the restoration process, click the **Save Settings** button to save these changes, or click the **Cancel Changes** button to undo your changes.



Figure 4-34: Factory Defaults

## Reboot

This tab allows you reboot of your Modem. To reboot your Modem, click the **Device Reboot** button.

Click the **Cancel Changes** button if you want to undo your changes.

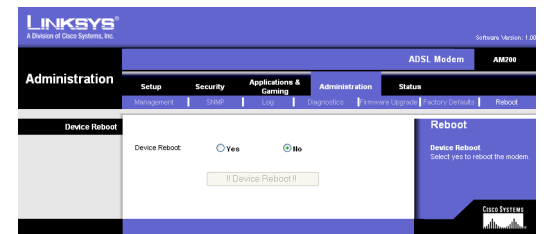


Figure 4-35: Reboot

# The Status Tab

## Modem

This screen displays information about your Modem and its Internet connection.

### Modem Information

Modem Information displays the Software Version, ADSL Version, Boot Code Version, and MAC Address.

### DSL Status

The DSL Status will be displayed after connecting to the DSL. They are the DSL Status, DSL Modulation Mode, DSL Path Mode, Downstream Rate, Upstream Rate, Downstream Margin, Upstream Margin, Downstream Line Attenuation, Upstream Line Attenuation, Downstream Transit Power, Upstream Transit Power, and LOS Errors.

### Internet Connection

The Internet Connections will be displayed after selecting the Internet connection number from the drop-down menu. They are PPP Login, Internet IP Address, Internet Netmask, and Internet Gateway.

## Local Network

The Local Network information that is displayed is the local IP Address, Subnet Mask, and DHCP Server. To view the DHCP Clients Table, click the **DHCP Clients Table** button.

**DHCP Clients Table.** Click the **DHCP Clients Table** button to show the current DHCP Client data. You will see the MAC address, computer name, IP address, and expiration date of the network clients using the DHCP server. (This data is stored in temporary memory and changes periodically.) To delete a client from the DHCP server, select the client, then click the **Delete** button.

Click the **Refresh** button if you want to Refresh your screen. Click the **Close** button to close the screen.

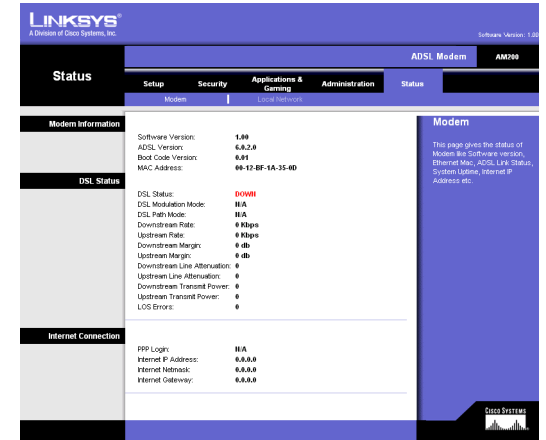


Figure 4-36: Status

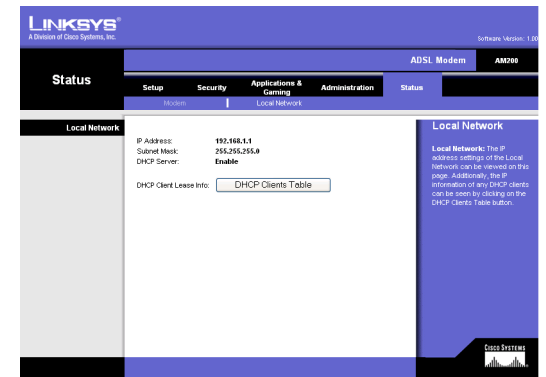


Figure 4-37: Local Network

**DHCP Active IP Table**

| Client Host Name | IP Address | MAC Address | Expires | Delete |
|------------------|------------|-------------|---------|--------|
| None             | None       | None        | None    | None   |

Figure 4-38: DHCP Clients Table

# Appendix A: Troubleshooting

This appendix consists of two parts: “Common Problems and Solutions” and “Frequently Asked Questions.” Provided are possible solutions to problems that may occur during the installation and operation of the Modem. Read the descriptions below to help you solve your problems. If you can’t find an answer here, check the Linksys international website at [www.linksys.com/international](http://www.linksys.com/international).

## Common Problems and Solutions

### 1. *I need to set a static IP address on a computer.*

You can assign a static IP address to a computer by performing the following steps:

- For Windows 98 and Me:
  1. Click **Start**, **Settings**, and **Control Panel**. Double-click **Network**.
  2. In The following network components are installed box, select the TCP/IP-> associated with your Ethernet adapter. If you only have one Ethernet adapter installed, you will only see one TCP/IP line with no association to an Ethernet adapter. Highlight it and click the Properties button.
  3. In the TCP/IP properties window, select the IP address tab, and select Specify an IP address. Enter a unique IP address that is not used by any other computer on the network connected to the Modem. Make sure that each IP address is unique for each computer or network device.
  4. Click the **Modem** tab, and in the New Modem prompt, enter 192.168.1.1, which is the default IP address of the Modem. Click the Add button to accept the entry.
  5. Click the **DNS** tab, and make sure the DNS Enabled option is selected. Enter the Host and Domain names (e.g., John for Host and home for Domain). Enter the DNS entry provided by your ISP. If your ISP has not provided the DNS IP address, contact your ISP to get that information or go to its website for the information.
  6. Click the **OK** button in the TCP/IP properties window, and click Close or the OK button for the Network window.
  7. Restart the computer when asked.
- For Windows 2000:
  1. Click **Start**, **Settings**, and **Control Panel**. Double-click **Network and Dial-Up Connections**.
  2. Right-click the Local Area Connection that is associated with the Ethernet adapter you are using, and select the Properties option.
  3. In the Components checked are used by this connection box, highlight Internet Protocol (TCP/IP), and click the **Properties** button. Select **Use the following IP address** option.
  4. Enter a unique IP address that is not used by any other computer on the network connected to the Modem.
  5. Enter the Subnet Mask, 255.255.255.0.
  6. Enter the Default Gateway, 192.168.1.1 (Modem’s default IP address).

#

7. Toward the bottom of the window, select Use the following DNS server addresses, and enter the Preferred DNS server and Alternative DNS server (provided by your ISP). Contact your ISP or go on its website to find the information.
  8. Click the **OK** button in the Internet Protocol (TCP/IP) Properties window, and click the **OK** button in the Local Area Connection Properties window.
  9. Restart the computer if asked.
- For Windows XP:  
The following instructions assume you are running Windows XP with the default interface. If you are using the Classic interface (where the icons and menus look like previous Windows versions), please follow the instructions for Windows 2000.
    1. Click **Start** and **Control Panel**.
    2. Click the **Network and Internet Connections** icon and then the **Network Connections** icon.
    3. Right-click the **Local Area Connection** that is associated with the Ethernet adapter you are using, and select the Properties option.
    4. In the **This connection uses the following items** box, highlight **Internet Protocol (TCP/IP)**. Click the **Properties** button.
    5. Enter a unique IP address that is not used by any other computer on the network connected to the Modem.
    6. Enter the Subnet Mask, 255.255.255.0.
    7. Enter the Default Gateway, 192.168.1.1 (Modem's default IP address).
    8. Toward the bottom of the window, select Use the following DNS server addresses, and enter the Preferred DNS server and Alternative DNS server (provided by your ISP). Contact your ISP or go on its website to find the information.
    9. Click the **OK** button in the Internet Protocol (TCP/IP) Properties window. Click the **OK** button in the Local Area Connection Properties window.

### **2. I am not getting an IP address on the Internet with my Internet connection.**

Verify the connection:

1. Make sure you are using the right Internet connection settings. Contact your ISP to see if your Internet connection type is RFC 1483 Bridged, RFC 2516 PPPoE, or RFC 2364 PPPoA, or Bridged Mode Only. Please refer to the Setup section of "Chapter 4: Configuring the ADSL Modem" for details on Internet connection settings. Verify that the VPI and VCI settings are correct.
2. Make sure you have the right cable. Check to see if the Modem column has a solidly lit DSL LED.
3. Make sure the cable connecting from your Modem's DSL port is connected to the wall jack of the DSL service line.
4. Turn off the computer and Modem. Wait 30 seconds, and then turn on the Modem, and computer. Check the Status tab of the Modem's web-based utility to see if you get an IP address.

**3. I forgot my password, or the password prompt always appears when I am saving settings to the Modem.**

- Reset the Modem to factory default by pressing the Reset button for 10 seconds and then releasing it. If you are still getting prompted for a password when saving settings, then perform the following steps:
  1. Access the Modem's web-based utility by going to <http://192.168.1.1> or the IP address of the Modem. Enter the default username and password **admin**, and click the **Administrations => Management** tab.
  2. Enter a different password in the Modem Password field, and enter the same password in the second field to confirm the password.
  3. Click the **Save Settings** button.

**4. To start over, I need to set the Modem to factory default.**

Hold the **Reset** button for 10 seconds and then release it. This will return the Internet settings, password, forwarding, and other settings on the Modem to the factory default settings. In other words, the Modem will revert to its original factory configuration.

**5. I need to upgrade the firmware.**

In order to upgrade the firmware with the latest features, you need to go to the Linksys website and download the latest firmware at [www.linksys.com](http://www.linksys.com) or <http://www.linksys.com/international>.

- Follow these steps:
  1. Go to the Linksys website at <http://www.linksys.com> or <http://www.linksys.com/international> and download the latest firmware.
  2. To upgrade the firmware, follow the steps in the Administration section found in "Chapter 4: Configuring the ADSL Modem."

**6. My DSL service's PPPoE is always disconnecting.**

PPPoE is not actually a dedicated or always-on connection. The DSL ISP can disconnect the service after a period of inactivity, just like a normal phone dial-up connection to the Internet.

- There is a setup option to "keep alive" the connection. This may not always work, so you may need to re-establish connection periodically.
  1. To connect to the Modem, go to the web browser, and enter <http://192.168.1.1> or the IP address of the Modem.
  2. Enter the username and password, if asked. (The default username and password is admin.)
  3. On the Setup screen, select the option **Keep Alive**, and set the Redial Period option at 1 minute.
  4. Click the **Save Settings** button. Click the **Status** tab, and click the **Connect** button.
  5. You may see the login status display as Connecting. Press the F5 key to refresh the screen, until you see the login status display as Connected.
  6. Click the **Save Settings** button to continue.
- If the connection is lost again, follow steps 1- 6 to re-establish connection.



**7. The Power LED flashes continuously.**

The Power LED lights up when the device is first powered up. In the meantime, the system will boot up itself and check for proper operation. After finishing the checking procedure, the LED remains steady to show that the system is working fine. If the LED continues to flash after this time, the device is not working properly. Try to flash the firmware by assigning a static IP address to the computer, and then upgrade the firmware. Try using the following settings, IP Address: 192.168.1.50 and Subnet Mask: 255.255.255.0.

**8. When I enter a URL or IP address, I get a time-out error or am prompted to retry.**

- Check if other computers work. If they do, ensure that your computer's IP settings are correct (IP Address, Subnet Mask, Default Gateway, and DNS). Restart the computer that is having a problem.
- If the computers are configured correctly, but still not working, check the Modem. Ensure that it is connected and powered on. Connect to it and check its settings. (If you cannot connect to it, check the LAN and power connections.)
- Manually configure the TCP/IP settings with a DNS address provided by your ISP.
- Make sure that your browser is set to connect directly and that any dial-up is disabled. For Internet Explorer, click **Tools, Internet Options**, and then the **Connection** tab. Make sure that Internet Explorer is set to **Never dial a connection**. For Netscape Navigator, click **Edit, Preferences, Advanced**, and **Proxy**. Make sure that Netscape Navigator is set to **Direct connection to the Internet**.

## Frequently Asked Questions

***What is the maximum number of IP addresses that the Modem will support?***

The Modem will support up to 253 IP addresses.

***Is IPSec Passthrough supported by the Modem?***

Yes, it is a built-in feature that is enabled by default.

***Where is the Modem installed on the network?***

The Modem is installed between the DSL wall jack and the LAN.

***Does the Modem support IPX or AppleTalk?***

No. TCP/IP is the only protocol standard for the Internet and has become the global standard for communications. IPX, a NetWare communications protocol used only to route messages from one node to another, and AppleTalk, a communications protocol used on Apple and Macintosh networks, can be used for LAN to LAN connections, but those protocols cannot connect from the Internet to a LAN.

***Does the LAN connection of the Modem support 100Mbps Ethernet?***

The Modem supports 100Mbps over the auto-sensing Fast Ethernet 10/100 switch on the LAN side of the Modem.

***Does the Modem support any operating system other than Windows 98SE, Windows Millennium, Windows 2000, or Windows XP?***

Yes, but Linksys does not, at this time, provide technical support for setup, configuration or troubleshooting of any non-Windows operating systems.

***The web page hangs; downloads are corrupt, or nothing but junk characters are being displayed on the screen. What do I need to do?***

Force your Ethernet adapter to 10Mbps or half duplex mode, and turn off the “Auto-negotiate” feature of your Ethernet adapter as a temporary measure. (Please look at the Network Control Panel in your Ethernet adapter’s Advanced Properties tab.) Make sure that your proxy setting is disabled in the browser. Check our website at [www.linksys.com](http://www.linksys.com) for more information.

***If all else fails in the installation, what can I do?***

Reset the Modem by holding down the reset button until the Power LED fully turns on and off. Reset your DSL modem by powering the unit off and then on. Obtain and flash the latest firmware release that is readily available on the Linksys website, [www.linksys.com](http://www.linksys.com).

***How will I be notified of new Modem firmware upgrades?***

All Linksys firmware upgrades are posted on the Linksys website at [www.linksys.com](http://www.linksys.com), where they can be downloaded for free. To upgrade the Modem’s firmware, use the Administration tab of the Modem’s web-based utility. If the Modem’s Internet connection is working well, there is no need to download a newer firmware version, unless that version contains new features that you would like to use.

***Will the Modem function in a Macintosh environment?***

Yes, but the Modem’s setup pages are accessible only through Internet Explorer 4.0 or Netscape Navigator 4.0 or higher for Macintosh.

***I am not able to get the web configuration screen for the Modem. What can I do?***

You can set your PC to a static IP Address.

***Is the Modem cross-platform compatible?***

Any platform that supports Ethernet and TCP/IP is compatible with the Modem.

***How can I check whether I have static or DHCP IP Addresses?***

Consult your ISP to obtain this information.

***Can the Modem act as my DHCP server?***

Yes. The Modem has DHCP server software built-in.

# Appendix B: Upgrading Firmware

The ADSL Modem allows you to upgrade firmware for the Modem through the Web-Utility's Firmware Upgrade tab from the Administration tab. Follow these instructions:

## Firmware Upgrade

1. Click the **Browse** button to find the firmware upgrade file that you downloaded from the Linksys website and then extracted.
2. Double-click the firmware file you downloaded and extracted. Click the **Upgrade** button, and follow the instructions there.

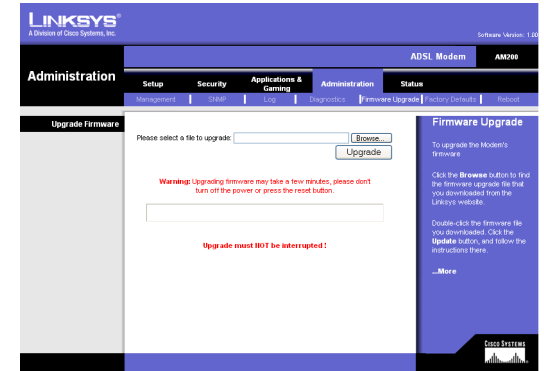


Figure B-1: Upgrade Firmware

# Appendix C: Glossary

This glossary contains some basic networking terms you may come across when using this product. For more advanced terms, see the complete Linksys glossary at <http://www.linksys.com/glossary>.

**Access Point** - A device that allows wireless-equipped computers and other devices to communicate with a wired network. Also used to expand the range of a wireless network.

**Ad-hoc** - A group of wireless devices communicating directly with each other (peer-to-peer) without the use of an access point.

**AES (Advanced Encryption Standard)** - A security method that uses symmetric 128-bit block data encryption.

**Bandwidth** - The transmission capacity of a given device or network.

**Bit** - A binary digit.

**Boot** - To start a device and cause it to start executing instructions.

**Broadband** - An always-on, fast Internet connection.

**Browser** - An application program that provides a way to look at and interact with all the information on the World Wide Web.

**Byte** - A unit of data that is usually eight bits long

**ADSL Modem** - A device that connects a computer to the cable television network, which in turn connects to the Internet.

**Daisy Chain** - A method used to connect devices in a series, one after the other.

**DDNS (Dynamic Domain Name System)** - Allows the hosting of a website, FTP server, or e-mail server with a fixed domain name (e.g., [www.xyz.com](http://www.xyz.com)) and a dynamic IP address.

**Default Gateway** - A device that forwards Internet traffic from your local area network.

**DHCP (Dynamic Host Configuration Protocol)** - A networking protocol that allows administrators to assign temporary IP addresses to network computers by "leasing" an IP address to a user for a limited amount of time, instead of assigning permanent IP addresses.

## **ADSL Modem**

**DMZ (Demilitarized Zone)** - Removes the Router's firewall protection from one PC, allowing it to be "seen" from the Internet.

**DNS (Domain Name Server)** - The IP address of your ISP's server, which translates the names of websites into IP addresses.

**Domain** - A specific name for a network of computers.

**Download** - To receive a file transmitted over a network.

**DSL (Digital Subscriber Line)** - An always-on broadband connection over traditional phone lines.

**Dynamic IP Address** - A temporary IP address assigned by a DHCP server.

**EAP (Extensible Authentication Protocol)** - A general authentication protocol used to control network access. Many specific authentication methods work within this framework.

**Encryption** - Encoding data transmitted in a network.

**Ethernet** - IEEE standard network protocol that specifies how data is placed on and retrieved from a common transmission medium.

**Firewall** - A set of related programs located at a network gateway server that protects the resources of a network from users from other networks.

**Firmware** - The programming code that runs a networking device.

**FTP (File Transfer Protocol)** - A protocol used to transfer files over a TCP/IP network.

**Full Duplex** - The ability of a networking device to receive and transmit data simultaneously.

**Gateway** - A device that interconnects networks with different, incompatible communications protocols.

**Half Duplex** - Data transmission that can occur in two directions over a single line, but only one direction at a time.

**HTTP (HyperText Transport Protocol)** - The communications protocol used to connect to servers on the World Wide Web.

**Infrastructure** - A wireless network that is bridged to a wired network via an access point.

**IP (Internet Protocol)** - A protocol used to send data over a network.

## ADSL Modem

**IP Address** - The address used to identify a computer or device on a network.

**IPCONFIG** - A Windows 2000 and XP utility that displays the IP address for a particular networking device.

**IPSec (Internet Protocol Security)** - A VPN protocol used to implement secure exchange of packets at the IP layer.

**ISP (Internet Service Provider)** - A company that provides access to the Internet.

**LAN** - The computers and networking products that make up your local network.

**MAC (Media Access Control) Address** - The unique address that a manufacturer assigns to each networking device.

**Mbps (MegaBits Per Second)** - One million bits per second; a unit of measurement for data transmission.

**NAT (Network Address Translation)** - NAT technology translates IP addresses of a local area network to a different IP address for the Internet.

**Network** - A series of computers or devices connected for the purpose of data sharing, storage, and/or transmission between users.

**Packet** - A unit of data sent over a network.

**Passphrase** - Used much like a password, a passphrase simplifies the WEP encryption process by automatically generating the WEP encryption keys for Linksys products.

**Ping (Packet Internet Groper)** - An Internet utility used to determine whether a particular IP address is online.

**POP3 (Post Office Protocol 3)** - A standard mail server commonly used on the Internet.

**Port** - The connection point on a computer or networking device used for plugging in cables or adapters.

**Power over Ethernet (PoE)** - A technology enabling an Ethernet network cable to deliver both data and power.

**PPPoE (Point to Point Protocol over Ethernet)** - A type of broadband connection that provides authentication (username and password) in addition to data transport.

**PPTP (Point-to-Point Tunneling Protocol)** - A VPN protocol that allows the Point to Point Protocol (PPP) to be tunneled through an IP network. This protocol is also used as a type of broadband connection in Europe.

**RADIUS (Remote Authentication Dial-In User Service)** - A protocol that uses an authentication server to control network access.

## ADSL Modem

**RJ-45 (Registered Jack-45)** - An Ethernet connector that holds up to eight wires.

**Roaming** - The ability to take a wireless device from one access point's range to another without losing the connection.

**Router** - A networking device that connects multiple networks together.

**Server** - Any computer whose function in a network is to provide user access to files, printing, communications, and other services.

**SMTP (Simple Mail Transfer Protocol)** - The standard e-mail protocol on the Internet.

**SNMP (Simple Network Management Protocol)** - A widely used network monitoring and control protocol.

**SPI (Stateful Packet Inspection) Firewall** - A technology that inspects incoming packets of information before allowing them to enter the network.

**SSID (Service Set Identifier)** - Your wireless network's name.

**Static IP Address** - A fixed address assigned to a computer or device that is connected to a network.

**Static Routing** - Forwarding data in a network via a fixed path.

**Subnet Mask** - An address code that determines the size of the network.

**Switch** - 1. A data switch that connects computing devices to host computers, allowing a large number of devices to share a limited number of ports. 2. A device for making, breaking, or changing the connections in an electrical circuit.

**TCP (Transmission Control Protocol)** - A network protocol for transmitting data that requires acknowledgement from the recipient of data sent.

**TCP/IP (Transmission Control Protocol/Internet Protocol)** - A set of instructions PCs use to communicate over a network.

**Telnet** - A user command and TCP/IP protocol used for accessing remote PCs.

**TFTP (Trivial File Transfer Protocol)** - A version of the TCP/IP FTP protocol that has no directory or password capability.

**Throughput** - The amount of data moved successfully from one node to another in a given time period.

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**TKIP (Temporal Key Integrity Protocol)** - a wireless encryption protocol that provides dynamic encryption keys for each packet transmitted.

**Topology** - The physical layout of a network.

**TX Rate** - Transmission Rate.

**Upgrade** - To replace existing software or firmware with a newer version.

**Upload** - To transmit a file over a network.

**URL (Uniform Resource Locator)** - The address of a file located on the Internet.

**VPN (Virtual Private Network)** - A security measure to protect data as it leaves one network and goes to another over the Internet.

**WAN (Wide Area Network)**- The Internet.

**WEP (Wired Equivalent Privacy)** - A method of encrypting network data transmitted on a wireless network for greater security.

**WLAN (Wireless Local Area Network)** - A group of computers and associated devices that communicate with each other wirelessly.

**WPA (Wi-Fi Protected Access)** - a wireless security protocol using TKIP (Temporal Key Integrity Protocol) encryption, which can be used in conjunction with a RADIUS server.



# Appendix D: Specifications

|                           |  |
|---------------------------|--|
| <b>Standards</b>          | IEEE 802.3, IEEE 802.3u, G.992.1 (G.dmt), G.992.2 (G.lite), G.922.3, G.992.5, T1.413i2 |
| <b>Ports</b>              | Power, DSL, Ethernet   |
| <b>Buttons</b>            | Reset  |
| <b>Cabling Type</b>       | UTP CAT 5 or better, Phone Cable (RJ-11)   |
| <b>LEDs</b>               | Power, Ethernet, DSL, Internet   |
| <b>Dimensions</b>         | 110 mm x 110 mm x 32 mm  |
| <b>Unit Weight</b>        | 0,135 kg   |
| <b>Power</b>              | External, 9V DC, 1A  |
| <b>Certifications</b>     | CE, UL, FCC  |
| <b>Operating Temp.</b>    | 0°C to 40°C  |
| <b>Storage Temp.</b>      | -20°C to 70°C  |
| <b>Operating Humidity</b> | 10% to 85% Non-Condensing  |
| <b>Storage Humidity</b>   | 5% to 90% Non-Condensing   |

# Appendix E: Warranty Information

Linksys warrants to You that, for a period of two years (the “Warranty Period”), your Linksys Product will be substantially free of defects in materials and workmanship under normal use. Your exclusive remedy and Linksys' entire liability under this warranty will be for Linksys at its option to repair or replace the Product or refund Your purchase price less any rebates. This limited warranty extends only to the original purchaser.

If the Product proves defective during the Warranty Period call Linksys Technical Support in order to obtain a Return Authorization Number, if applicable. **BE SURE TO HAVE YOUR PROOF OF PURCHASE ON HAND WHEN CALLING.** If You are requested to return the Product, mark the Return Authorization Number clearly on the outside of the package and include a copy of your original proof of purchase. **RETURN REQUESTS CANNOT BE PROCESSED WITHOUT PROOF OF PURCHASE.** You are responsible for shipping defective Products to Linksys. Linksys pays for UPS Ground shipping from Linksys back to You only. Customers located outside of the United States of America and Canada are responsible for all shipping and handling charges.

**ALL IMPLIED WARRANTIES AND CONDITIONS OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE ARE LIMITED TO THE DURATION OF THE WARRANTY PERIOD. ALL OTHER EXPRESS OR IMPLIED CONDITIONS, REPRESENTATIONS AND WARRANTIES, INCLUDING ANY IMPLIED WARRANTY OF NON-INFRINGEMENT, ARE DISCLAIMED.** Some jurisdictions do not allow limitations on how long an implied warranty lasts, so the above limitation may not apply to You. This warranty gives You specific legal rights, and You may also have other rights which vary by jurisdiction.

This warranty does not apply if the Product (a) has been altered, except by Linksys, (b) has not been installed, operated, repaired, or maintained in accordance with instructions supplied by Linksys, or (c) has been subjected to abnormal physical or electrical stress, misuse, negligence, or accident. In addition, due to the continual development of new techniques for intruding upon and attacking networks, Linksys does not warrant that the Product will be free of vulnerability to intrusion or attack.

**TO THE EXTENT NOT PROHIBITED BY LAW, IN NO EVENT WILL LINKSYS BE LIABLE FOR ANY LOST DATA, REVENUE OR PROFIT, OR FOR SPECIAL, INDIRECT, CONSEQUENTIAL, INCIDENTAL OR PUNITIVE DAMAGES, REGARDLESS OF THE THEORY OF LIABILITY (INCLUDING NEGLIGENCE), ARISING OUT OF OR RELATED TO THE USE OF OR INABILITY TO USE THE PRODUCT (INCLUDING ANY SOFTWARE), EVEN IF LINKSYS HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES. IN NO EVENT WILL LINKSYS' LIABILITY EXCEED THE AMOUNT PAID BY YOU FOR THE PRODUCT.** The foregoing limitations will apply even if any warranty or remedy provided under this Agreement fails of its essential purpose. Some jurisdictions do not allow the exclusion or limitation of incidental or consequential damages, so the above limitation or exclusion may not apply to You.

**This Warranty is valid and may be processed only in the country of purchase.**

Please direct all inquiries to: Linksys, P.O. Box 18558, Irvine, CA 92623.

# Appendix F: Regulatory Information

## FCC Statement

This product has been tested and complies with the specifications for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used according to the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which is found by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna
- Increase the separation between the equipment or devices
- Connect the equipment to an outlet other than the receiver's
- Consult a dealer or an experienced radio/TV technician for assistance

## Safety Notices

Caution: To reduce the risk of fire, use only No.26 AWG or larger telecommunication line cord.

Do not use this product near water, for example, in a wet basement or near a swimming pool.

Avoid using this product during an electrical storm. There may be a remote risk of electric shock from lightning.

## Industry Canada (Canada)

This device complies with Canadian ICES-003 rule.

Cet appareil est conforme à la norme NMB-003 d'Industry Canada.

## EC Declaration of Conformity (Europe)

In compliance with the EMC Directive 89/336/EEC, Low Voltage Directive 73/23/EEC, and Amendment Directive 93/68/EEC, this product meets the requirements of the following standards:

- EN55022 Emission
- EN55024 Immunity

**User Information for Consumer Products Covered by EU Directive 2002/96/EC on Waste Electric and Electronic Equipment (WEEE)**

This document contains important information for users with regards to the proper disposal and recycling of Linksys products. Consumers are required to comply with this notice for all electronic products bearing the following symbol:

**English**

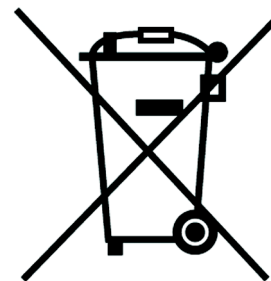
**Environmental Information for Customers in the European Union**

European Directive 2002/96/EC requires that the equipment bearing this symbol on the product and/or its packaging must not be disposed of with unsorted municipal waste. The symbol indicates that this product should be disposed of separately from regular household waste streams. It is your responsibility to dispose of this and other electric and electronic equipment via designated collection facilities appointed by the government or local authorities. Correct disposal and recycling will help prevent potential negative consequences to the environment and human health. For more detailed information about the disposal of your old equipment, please contact your local authorities, waste disposal service, or the shop where you purchased the product.

**Ceština/Czech**

**Informace o ochraně životního prostředí pro zákazníky v zemích Evropské unie**

Evropská směrnice 2002/96/ES zakazuje, aby zařízení označené tímto symbolem na produktu anebo na obalu bylo likvidováno s netříděným komunálním odpadem. Tento symbol udává, že daný produkt musí být likvidován odděleně od běžného komunálního odpadu. Odpovídáte za likvidaci tohoto produktu a dalších elektrických a elektronických zařízení prostřednictvím určených sběrných míst stanovených vládou nebo místními úřady. Správná likvidace a recyklace pomáhá předcházet potenciálním negativním dopadům na životní prostředí a lidské zdraví. Podrobnější informace o likvidaci starého vybavení si laskavě vyžádejte od místních úřadů, podniku zabývajícího se likvidací komunálních odpadů nebo obchodu, kde jste produkt zakoupili.



## Dansk/Danish

### Miljøinformation for kunder i EU

EU-direktiv 2002/96/EF kræver, at udstyr der bærer dette symbol på produktet og/eller emballagen ikke må bortskaffes som usorteret kommunalt affald. Symbolet betyder, at dette produkt skal bortskaffes adskilt fra det almindelige husholdningsaffald. Det er dit ansvar at bortskaffe dette og andet elektrisk og elektronisk udstyr via bestemte indsamlingssteder udpeget af staten eller de lokale myndigheder. Korrekt bortskaffelse og genvinding vil hjælpe med til at undgå mulige skader for miljøet og menneskers sundhed. Kontakt venligst de lokale myndigheder, renovationstjenesten eller den butik, hvor du har købt produktet, angående mere detaljeret information om bortskaffelse af dit gamle udstyr.

## Deutsch/German

### Umweltinformation für Kunden innerhalb der Europäischen Union

Die Europäische Richtlinie 2002/96/EC verlangt, dass technische Ausrüstung, die direkt am Gerät und/oder an der Verpackung mit diesem Symbol versehen ist nicht zusammen mit unsortiertem Gemeindeabfall entsorgt werden darf. Das Symbol weist darauf hin, dass das Produkt von regulärem Haushaltsmüll getrennt entsorgt werden sollte. Es liegt in Ihrer Verantwortung, dieses Gerät und andere elektrische und elektronische Geräte über die dafür zuständigen und von der Regierung oder örtlichen Behörden dazu bestimmten Sammelstellen zu entsorgen. Ordnungsgemäßes Entsorgen und Recyceln trägt dazu bei, potentielle negative Folgen für Umwelt und die menschliche Gesundheit zu vermeiden. Wenn Sie weitere Informationen zur Entsorgung Ihrer Altgeräte benötigen, wenden Sie sich bitte an die örtlichen Behörden oder städtischen Entsorgungsdienste oder an den Händler, bei dem Sie das Produkt erworben haben.

## Eesti/Estonian

### Keskkonnaalane informatsioon Euroopa Liidus asuvatele klientidele

Euroopa Liidu direktiivi 2002/96/EÜ nõuete kohaselt on seadmeid, millel on tootel või pakendil käesolev sümbol, keelatud kõrvaldada koos sorteerimata olmejäätmetega. See sümbol näitab, et toode tuleks kõrvaldada eraldi tavalistest olmejäätmevoogudest. Olete kohustatud kõrvaldama käesoleva ja ka muud elektri- ja elektroonikaseadmed riigi või kohalike ametiasutuste poolt ette nähtud kogumispunktide kaudu. Seadmete korrektne kõrvaldamine ja ringlussevõtt aitab vältida võimalikke negatiivseid tagajärgi keskkonnale ning inimeste tervisele. Vanade seadmete kõrvaldamise kohta täpsema informatsiooni saamiseks võtke palun ühendust kohalike ametiasutustega, jäätmekäitlusfirmaga või kauplusega, kust te toote ostsite.

## Español/Spanish

### Información medioambiental para clientes de la Unión Europea

La Directiva 2002/96/CE de la UE exige que los equipos que lleven este símbolo en el propio aparato y/o en su embalaje no deben eliminarse junto con otros residuos urbanos no seleccionados. El símbolo indica que el producto en cuestión debe separarse de los residuos domésticos convencionales con vistas a su eliminación. Es responsabilidad suya desechar este y cualesquiera otros aparatos eléctricos y electrónicos a través de los puntos de recogida que ponen a su disposición el gobierno y las autoridades locales. Al desechar y reciclar correctamente estos aparatos estará contribuyendo a evitar posibles consecuencias negativas para el medio ambiente y la salud de las personas. Si desea obtener información más detallada sobre la eliminación segura de su aparato usado, consulte a las autoridades locales, al servicio de recogida y eliminación de residuos de su zona o pregunte en la tienda donde adquirió el producto.

## Ελληνικά/Greek

### Στοιχεία περιβαλλοντικής προστασίας για πελάτες εντός της Ευρωπαϊκής Ένωσης

Η Κοινοτική Οδηγία 2002/96/EC απαιτεί ότι ο εξοπλισμός ο οποίος φέρει αυτό το σύμβολο στο προϊόν και/ή στη συσκευασία του δεν πρέπει να απορρίπτεται μαζί με τα μικτά κοινотικά απορρίμματα. Το σύμβολο υποδεικνύει ότι αυτό το προϊόν θα πρέπει να απορρίπτεται ξεχωριστά από τα συνήθη οικιακά απορρίμματα. Είστε υπεύθυνος για την απόρριψη του παρόντος και άλλου ηλεκτρικού και ηλεκτρονικού εξοπλισμού μέσω των καθορισμένων εγκαταστάσεων συγκέντρωσης απορριμμάτων οι οποίες παρέχονται από το κράτος ή τις αρμόδιες τοπικές αρχές. Η σωστή απόρριψη και ανακύκλωση συμβάλλει στην πρόληψη πιθανών αρνητικών συνεπειών για το περιβάλλον και την υγεία. Για περισσότερες πληροφορίες σχετικά με την απόρριψη του παλιού σας εξοπλισμού, παρακαλώ επικοινωνήστε με τις τοπικές αρχές, τις υπηρεσίες απόρριψης ή το κατάστημα από το οποίο αγοράσατε το προϊόν.

## Français/French

### Informations environnementales pour les clients de l'Union européenne

La directive européenne 2002/96/CE exige que l'équipement sur lequel est apposé ce symbole sur le produit et/ou son emballage ne soit pas jeté avec les autres ordures ménagères. Ce symbole indique que le produit doit être éliminé dans un circuit distinct de celui pour les déchets des ménages. Il est de votre responsabilité de jeter ce matériel ainsi que tout autre matériel électrique ou électronique par les moyens de collecte indiqués par le gouvernement et les pouvoirs publics des collectivités territoriales. L'élimination et le recyclage en bonne et due forme ont pour but de lutter contre l'impact néfaste potentiel de ce type de produits sur l'environnement et la santé publique. Pour plus d'informations sur le mode d'élimination de votre ancien équipement, veuillez prendre contact avec les pouvoirs publics locaux, le service de traitement des déchets, ou l'endroit où vous avez acheté le produit.

## Italiano/Italian

### Informazioni relative all'ambiente per i clienti residenti nell'Unione Europea

La direttiva europea 2002/96/EC richiede che le apparecchiature contrassegnate con questo simbolo sul prodotto e/o sull'imballaggio non siano smaltite insieme ai rifiuti urbani non differenziati. Il simbolo indica che questo prodotto non deve essere smaltito insieme ai normali rifiuti domestici. È responsabilità del proprietario smaltire sia questi prodotti sia le altre apparecchiature elettriche ed elettroniche mediante le specifiche strutture di raccolta indicate dal governo o dagli enti pubblici locali. Il corretto smaltimento ed il riciclaggio aiuteranno a prevenire conseguenze potenzialmente negative per l'ambiente e per la salute dell'essere umano. Per ricevere informazioni più dettagliate circa lo smaltimento delle vecchie apparecchiature in Vostro possesso, Vi invitiamo a contattare gli enti pubblici di competenza, il servizio di smaltimento rifiuti o il negozio nel quale avete acquistato il prodotto.

## Latviešu valoda/Latvian

### Ekoloģiska informācija klientiem Eiropas Savienības jurisdikcijā

Direktīvā 2002/96/EK ir prasība, ka aprīkojumu, kam pievienota zīme uz paša izstrādājuma vai uz tā iesaiņojuma, nedrīkst izmest nešķīrotā veidā kopā ar komunālajiem atkritumiem (tiem, ko rada vietēji iedzīvotāji un uzņēmumi). Šī zīme nozīmē to, ka šī ierīce ir jāizmet atkritumos tā, lai tā nenonāktu kopā ar parastiem mājtsaimniecības atkritumiem. Jūsu pienākums ir šo un citas elektriskas un elektroniskas ierīces izmest atkritumos, izmantojot īpašus atkritumu savākšanas veidus un līdzekļus, ko nodrošina valsts un pašvaldību iestādes. Ja izmešana atkritumos un pārstrāde tiek veikta pareizi, tad mazinās iespējamais kaitējums dabai un cilvēku veselībai. Sīkākas ziņas par novecojušu aprīkojuma izmešanu atkritumos jūs varat saņemt vietējā pašvaldībā, atkritumu savākšanas dienestā, kā arī veikalā, kur iegādājāties šo izstrādājumu.

## Lietuvškai/Lithuanian

### Aplinkosaugos informacija, skirta Europos Sąjungos vartotojams

Europos direktyva 2002/96/EC numato, kad įrangos, kuri ir (arba) kurios pakuotė yra pažymėta šiuo simboliu, negalima šalinti kartu su nerūšiuotomis komunalinėmis atliekomis. Šis simbolis rodo, kad gaminį reikia šalinti atskirai nuo bendro buitinių atliekų srauto. Jūs privalote užtikrinti, kad ši ir kita elektros ar elektroninė įranga būtų šalinama per tam tikras nacionalinės ar vietinės valdžios nustatytas atliekų rinkimo sistemas. Tinkamai šalinant ir perdurbant atliekas, bus išvengta galimos žalos aplinkai ir žmonių sveikatai. Daugiau informacijos apie jūsų senos įrangos šalinimą gali pateikti vietinės valdžios institucijos, atliekų šalinimo tarnybos arba parduotuvės, kuriose įsigijote tą gaminį.

## Malti/Maltese

### Informazzjoni Ambjentali għal Kliġenti fl-Unjoni Ewropea

Id-Direttiva Ewropea 2002/96/KE titlob li t-tagħmir li jkun fih is-simbolu fuq il-prodott u/jew fuq l-ippakkjar ma jstax jintrema ma' skart municiġpali li ma ġieħ isseparat. Is-simbolu jindika li dan il-prodott għandu jintrema separatament minn ma' l-iskart domestiku regolari. Hija responsabbiltà tiegħek li tarmi dan it-tagħmir u kull tagħmir iehor ta' l-elettriku u elettroniku permezz ta' faċilitajiet ta' ġbir appuntati apposta mill-gvern jew mill-awtoritajiet lokali. Ir-rimi b'mod korrett u r-riciklagg jghin jipprevjeni konsegwenzi negattivi potenzjali għall-ambjent u għas-saħħa tal-bniedem. Għal aktar informazzjoni dettaljata dwar ir-rimi tat-tagħmir antik tiegħek, jekk jogħġbok ikkuntattja lill-awtoritajiet lokali tiegħek, is-servizzi għar-rimi ta' l-iskart, jew il-hanut minn fejn xtrajt il-prodott.

## Magyar/Hungarian

### Környezetvédelmi információ az európai uniós vásárlók számára

A 2002/96/EC számú európai uniós irányelv megkívánja, hogy azokat a termékeket, amelyeken, és/vagy amelyek csomagolásán az alábbi címke megjelenik, tilos a többi szelektálatlan lakossági hulladékkal együtt kidobni. A címke azt jelöli, hogy az adott termék kidobásakor a szokványos háztartási hulladékelszállítási rendszerektől elkülönített eljárást kell alkalmazni. Az Ön felelőssége, hogy ezt, és más elektromos és elektronikus berendezéseit a kormányzati vagy a helyi hatóságok által kijelölt gyűjtőrendszeren keresztül számolja fel. A megfelelő hulladékfeldolgozás segít a környezetre és az emberi egészségre potenciálisan ártalmas negatív hatások megelőzésében. Ha elavult berendezéseinek felszámolásához további részletes információra van szüksége, kérjük, lépjen kapcsolatba a helyi hatóságokkal, a hulladékfeldolgozási szolgálattal, vagy azzal üzlettel, ahol a terméket vásárolta.

## Nederlands/Dutch

### Milieu-informatie voor klanten in de Europese Unie

De Europese Richtlijn 2002/96/EC schrijft voor dat apparatuur die is voorzien van dit symbool op het product of de verpakking, niet mag worden ingezameld met niet-gescheiden huishoudelijk afval. Dit symbool geeft aan dat het product apart moet worden ingezameld. U bent zelf verantwoordelijk voor de vernietiging van deze en andere elektrische en elektronische apparatuur via de daarvoor door de landelijke of plaatselijke overheid aangewezen inzamelingskanalen. De juiste vernietiging en recycling van deze apparatuur voorkomt mogelijke negatieve gevolgen voor het milieu en de gezondheid. Voor meer informatie over het vernietigen van uw oude apparatuur neemt u contact op met de plaatselijke autoriteiten of afvalverwerkingsdienst, of met de winkel waar u het product hebt aangeschaft.

## Norsk/Norwegian

### Miljøinformasjon for kunder i EU

EU-direktiv 2002/96/EF krever at utstyr med følgende symbol avbildet på produktet og/eller pakningen, ikke må kastes sammen med usortert avfall. Symbolet indikerer at dette produktet skal håndteres atskilt fra ordinær avfallsinnsamling for husholdningsavfall. Det er ditt ansvar å kvitte deg med dette produktet og annet elektrisk og elektronisk avfall via egne innsamlingsordninger slik myndighetene eller kommunene bestemmer. Korrekt avfallshåndtering og gjenvinning vil være med på å forhindre mulige negative konsekvenser for miljø og helse. For nærmere informasjon om håndtering av det kasserte utstyret ditt, kan du ta kontakt med kommunen, en innsamlingsstasjon for avfall eller butikken der du kjøpte produktet.

## Polski/Polish

### Informacja dla klientów w Unii Europejskiej o przepisach dotyczących ochrony środowiska

Dyrektywa Europejska 2002/96/EC wymaga, aby sprzęt oznaczony symbolem znajdującym się na produkcie i/lub jego opakowaniu nie był wyrzucany razem z innymi niesortowanymi odpadami komunalnymi. Symbol ten wskazuje, że produkt nie powinien być usuwany razem ze zwykłymi odpadami z gospodarstw domowych. Na Państwu spoczywa obowiązek wyrzucania tego i innych urządzeń elektrycznych oraz elektronicznych w punktach odbioru wyznaczonych przez władze krajowe lub lokalne. Pozbywanie się sprzętu we właściwy sposób i jego recykling pomogą zapobiec potencjalnie negatywnym konsekwencjom dla środowiska i zdrowia ludzkiego. W celu uzyskania szczegółowych informacji o usuwaniu starego sprzętu, prosimy zwrócić się do lokalnych władz, służb oczyszczania miasta lub sklepu, w którym produkt został nabyty.

## Português/Portuguese

### Informação ambiental para clientes da União Europeia

A Directiva Europeia 2002/96/CE exige que o equipamento que exibe este símbolo no produto e/ou na sua embalagem não seja eliminado junto com os resíduos municipais não separados. O símbolo indica que este produto deve ser eliminado separadamente dos resíduos domésticos regulares. É da sua responsabilidade eliminar este e qualquer outro equipamento eléctrico e electrónico através dos instalações de recolha designadas pelas autoridades governamentais ou locais. A eliminação e reciclagem correctas ajudarão a prevenir as consequências negativas para o ambiente e para a saúde humana. Para obter informações mais detalhadas sobre a forma de eliminar o seu equipamento antigo, contacte as autoridades locais, os serviços de eliminação de resíduos ou o estabelecimento comercial onde adquiriu o produto.

## Slovenčina/Slovak

### Informácie o ochrane životného prostredia pre zákazníkov v Európskej únii

Podľa európskej smernice 2002/96/ES zariadenie s týmto symbolom na produkte a/alebo jeho balení nesmie byť likvidované spolu s netriedeným komunálnym odpadom. Symbol znamená, že produkt by sa mal likvidovať oddelene od bežného odpadu z domácnosti. Je vašou povinnosťou likvidovať toto i ostatné elektrické a elektronické zariadenia prostredníctvom špecializovaných zberných zariadení určených vládou alebo miestnymi orgánmi. Správna likvidácia a recyklácia pomôže zabrániť prípadným negatívnym dopadom na životné prostredie a zdravie ľudí. Ak máte záujem o podrobnejšie informácie o likvidácii starého zariadenia, obráťte sa, prosím, na miestne orgány, organizácie zaoberajúce sa likvidáciou odpadov alebo obchod, v ktorom ste si produkt zakúpili.

## Slovenčina/Slovene

### Okoljske informacije za stranke v Evropski uniji

Evropska direktiva 2002/96/EC prepoveduje odlaganje opreme, označene s tem simbolom – na izdelku in/ali na embalaži – med običajne, nerazvrščene odpadke. Ta simbol opozarja, da je treba izdelek odvreči ločeno od preostalih gospodinskih odpadkov. Vaša odgovornost je, da to in preostalo električno in elektronsko opremo odnesete na posebna zbirališča, ki jih določijo državne ustanove ali lokalna uprava. S pravilnim odlaganjem in recikliranjem boste preprečili morebitne škodljive vplive na okolje in zdravje ljudi. Če želite izvedeti več o odlaganju stare opreme, se obrnite na lokalno upravo, odpad ali trgovino, kjer ste izdelek kupili.

## Suomi/Finnish

### Ympäristöä koskevia tietoja EU-alueen asiakkaille

EU-direktiivi 2002/96/EY edellyttää, että jos laitteistossa on tämä symboli itse tuotteessa ja/tai sen pakkauksessa, laitteistoa ei saa hävittää lajittelemattoman yhdyskuntajätteen mukana. Symboli merkitsee sitä, että tämä tuote on hävitettävä erillään tavallisesta kotitalousjätteestä. Sinun vastuullasi on hävittää tämä elektroniikkatuote ja muut vastaavat elektroniikkatuotteet viemällä tuote tai tuotteet viranomaisten määräämään keräyspisteeseen. Laitteiston oikea hävittäminen estää mahdolliset kielteiset vaikutukset ympäristöön ja ihmisten terveyteen. Lisätietoja vanhan laitteiston oikeasta hävitystavasta saa paikallisilta viranomaisilta, jätteenhävityspalvelusta tai siitä myymälästä, josta ostit tuotteen.

## Svenska/Swedish

### Miljöinformation för kunder i Europeiska unionen

Det europeiska direktivet 2002/96/EC kräver att utrustning med denna symbol på produkten och/eller förpackningen inte får kastas med osorterat kommunalt avfall. Symbolen visar att denna produkt bör kastas efter att den avskiljts från vanligt hushållsavfall. Det faller på ditt ansvar att kasta denna och annan elektrisk och elektronisk utrustning på fastställda insamlingsplatser utsedda av regeringen eller lokala myndigheter. Korrekt kassering och återvinning skyddar mot eventuella negativa konsekvenser för miljön och personhälsa. För mer detaljerad information om kassering av din gamla utrustning kontaktar du dina lokala myndigheter, avfallshanteringen eller butiken där du köpte produkten.

For more information, visit [www.linksys.com](http://www.linksys.com).



# Appendix G: Contact Information

Need to contact Linksys?

Visit us online for information on the latest products and updates to your existing products at:

<http://www.linksys.com/international>

If you experience problems with any Linksys product, you can e-mail us at:

| In Europe      | E-mail Address                        |
|----------------|---------------------------------------|
| Austria        | support.at@linksys.com                |
| Belgium        | support.be@linksys.com                |
| Czech Republic | support.cz@linksys.com                |
| Denmark        | support.dk@linksys.com                |
| Finland        | support.fi@linksys.com                |
| France         | support.fr@linksys.com                |
| Germany        | support.de@linksys.com                |
| Greece         | support.gr@linksys.com (English only) |
| Hungary        | support.hu@linksys.com                |
| Ireland        | support.ie@linksys.com                |
| Italy          | support.it@linksys.com                |
| Netherlands    | support.nl@linksys.com                |
| Norway         | support.no@linksys.com                |
| Poland         | support.pl@linksys.com                |
| Portugal       | support.pt@linksys.com                |
| Russia         | support.ru@linksys.com                |
| Spain          | support.es@linksys.com                |
| Sweden         | support.se@linksys.com                |

## ADSL Modem

| <b>In Europe</b> | <b>E-mail Address</b>  |
|------------------|------------------------|
| Switzerland      | support.ch@linksys.com |
| United Kingdom   | support.uk@linksys.com |

| <b>Outside of Europe</b> | <b>E-mail Address</b>   |
|--------------------------|---|
| Asia Pacific             | asiасupport@linksys.com (English only)                        |
| Latin America            | support.portuguese@linksys.com or support.spanish@linksys.com |
| Middle East & Africa     | support.mea@linksys.com (English only)                        |
| South Africa             | support.ze@linksys.com (English only)                         |
| UAE                      | support.ae@linksys.com (English only)                         |
| U.S. and Canada          | support@linksys.com   |

Note: For some countries, support may be available only in English.